SIDE'S GLOBAL RESEARCH PROGRAMMES

ANNUAL REPORTING

INTERNATIONAL SCIENCE PROGRAMME (ISP)

ANNUAL REPORT 2017
Cover picture: From the ANEC Workshop “Analytical Electrochemistry for promotion of a Clean Environment”, 11-13 April 2017, Dakar, Senegal
Section 1: EXECUTIVE SUMMARY

Objective, Structure and Organisation, and Impact
Activities and Results
Other Activities and Events

Section 2: ORGANISATION

Section 3: OBJECTIVES, OPERATION AND IMPACT

3.1 ISP’s Objectives
3.2 ISP’s Method of Operation
3.3 Impact of ISP Support on Development
   3.3.1 ISP and the SDGs
   3.3.2 Continued work to promote gender equality

Section 4: STRUCTURE

4.1 The ISP Board
4.2 The ISP Executive Committee
4.3 The ISP Scientific Reference Groups
4.4 The ISP Staff

Section 5: PROGRAM-WIDE RESULTS

5.1 Activities
   5.1.1 Research Groups
   5.1.2 Scientific Networks
5.2 Results and Expenditures
   5.2.1 Examples of Research Findings
   5.2.2 RBM Logical Framework Follow-Up and Analysis of Key Results
   5.2.3 Expenditures by Supported Activities
5.3 Staff, Students and Theses
   5.3.1 Staff in Supported Activities
   5.3.2 Students in Supported Activities
5.4 Dissemination by Supported Activities .................................................................46
  5.4.1 Publications ....................................................................................................46
  5.4.2 Contributions to Conferences, Workshops and Meetings............................47
  5.4.3 Arranged Conferences, Workshops, Training Courses, etc.........................49
5.5 Outputs and Outcomes that were not achieved ..................................................50

Section 6: APPLICATIONS AND IMPACT ................................................................51
  6.1 Use of Results and Knowledge...........................................................................51
    6.1.1 Use of Research Results and Skills..............................................................51
    6.1.2 Policy Influence and Opportunities............................................................52
    6.1.3 Technical Development and Services.........................................................54
  6.2 Outreach .............................................................................................................55
  6.3 Strengths and Benefits to Researchers and Partners ..........................................60
    6.3.1 Awards, Honors and Promotions .................................................................60

SECTION 7: OTHER PROGRAMS AND EVENTS .........................................................65
  7.1 Sida Assignments...................................................................................................65
    7.1.1 Ethiopia .......................................................................................................65
    7.1.2 Mozambique ..............................................................................................65
    7.1.3 Tanzania ......................................................................................................66
    7.1.4 Uganda ........................................................................................................66
    7.1.5 Payment of Subsistence Allowances to Sida Bilateral Students.................66
    7.1.6 Student Activities .......................................................................................66
  7.2 Other activities ....................................................................................................67
    7.2.1 Strategic Activities ......................................................................................67
    7.2.2 Collaboration ...............................................................................................68
    7.2.3 Honors ..........................................................................................................69
    7.2.4 Dissemination ...............................................................................................69
    7.2.5 Minor Field Study Fellowships ....................................................................70
    7.2.6 Seminars, Meetings and Visits .................................................................70
Appendix 1. Academic Theses

PhD graduations

Bangladesh

Botswana

Burkina Faso

Cambodia

Costa Rica

Côte d'Ivoire

Ethiopia

Honduras

Kenya

Mali

Myanmar

Nigeria

Rwanda

Senegal

Tanzania

Tunisia

Uganda

Zimbabwe

Other postgraduate theses

Bangladesh

Burkina Faso

Cambodia

Cameroon

Ethiopia

Kenya

Mali
Laos .......................................................................................................................................................... 92
Myanmar ................................................................................................................................................... 92
Senegal ...................................................................................................................................................... 94
Tanzania ................................................................................................................................................... 95
Tunisia ......................................................................................................................................................... 96
Uganda ....................................................................................................................................................... 96
Zambia ....................................................................................................................................................... 97
Zimbabwe .................................................................................................................................................. 97

Appendix 2 Publications ................................................................................................................. 99
Chemistry Publications ....................................................................................................................... 100
Publications in Scientific Journals ....................................................................................................... 100
Books, Book Chapters, Popular Publications, Technical Reports, etc ........................................ 119
Mathematics Publications .................................................................................................................... 122
Publications in Scientific Journals ....................................................................................................... 122
Books, Book Chapters, Popular Publications, Technical Reports, etc ........................................ 132
Physics Publications ............................................................................................................................. 133
Publications in Scientific Journals ....................................................................................................... 133
Books, Book Chapters, Popular Publications, Technical Reports, etc ........................................ 144

Appendix 3. Contributions to Conferences, Workshops and Meetings ........................................ 145
International .......................................................................................................................................... 145
Regional .................................................................................................................................................. 159
National/Local ...................................................................................................................................... 176
Other Communications ......................................................................................................................... 187
Arranged Meetings ................................................................................................................................. 194

Appendix 4. Postdoctoral and Scientific Visits ................................................................................. 203

Appendix 5. Abbreviations and Acronyms ....................................................................................... 216
SECTION 1: EXECUTIVE SUMMARY


Objective, Structure and Organisation, and Impact (Sections 2 – 4)

Objective

The objective of the International Science Programme (ISP) is to contribute to the development of active and sustainable environments for higher education and scientific research in developing countries, within chemistry, mathematics, and physics, in order to increase the domestic production and use of results and skills relevant for the fight against poverty.

Structure and Organisation

The support is collaborative and long-term, with a strong local ownership. Support is provided to institutionally based research groups, and to scientific networks. It includes cooperation with research groups at more advanced host institutions at Swedish universities, in other Nordic and European countries, and in the regions.

ISP is a unit at the Faculty of Science and Technology at Uppsala University. It has three subprograms:

- International Programme in the Physical Sciences (IPPS, since 1961)
- International Programme in the Chemical Sciences (IPICS, since 1970)
- International Programme in the Mathematical Sciences (IPMS, since 2002)

In 2017, ISP operated the core program on contributions from Sida (31 million SEK), Uppsala University (2.85 million SEK) and Stockholm University (1 million SEK).

A Board and an Executive Committee to the Board is governing ISP. Each subprogram has a Scientific Reference Group to guide activities. The Board and the reference groups have participants representing institutions outside Uppsala University and Sweden. The operation of ISP is regulated in an ordinance established by the Swedish government in 1988. In 2017, ISP had five core scientific and nine administrative staff members. Two additional staff members contributed with evaluation and monitoring, and project coordination.

Impact

Through ISP’s capacity building work and support to research of relevance to development challenges, ISP is contributing to SDG 17 - Partnership for the Goals. More specifically target 17.9 aiming to "enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation".

In 2017, ISP-supported research groups and networks have, with their research and competence, contributed in several ways to achievements towards the SDGs.
Activities and Results (Sections 5 – 6)

Supported research groups and scientific networks

In 2017, ISP supported 40 research groups and 20 scientific networks. There were 19 research groups in chemistry, one in mathematics, and 20 in physics. In nine of the twelve Swedish “focus countries” totally 33 research groups were supported. Seven research groups were supported in three “non-focus countries”, Laos, Myanmar and Zimbabwe, four in chemistry and three in physics. In addition, 20 scientific networks were supported, including the national network Cambodian Chemical Society, which up to 2016 was an activity supported through the chemistry group IPICS CAB:01.

Major results

Groups and networks reported 442 active PhD students (28% female), and 631 students training for MSc, MPhil or Licentiate degrees (31% female), benefiting directly or indirectly from ISP support. About 24% of the PhD students, and 3% of the Master students were trained in sandwich programs. In total, 90 PhD and 258 MSc (etc.) students graduated. Most of the PhD graduates (78%) were trained in local programs, 40% of them female, whereas 22% were trained in "sandwich" programs, 30% of them female. The majority of 258 graduated MSc (etc.) students were trained in local programs (99%, 39% of them female).

The research groups and networks disseminated close to 800 scientific papers as publications or at conferences. There were 310 publications in scientific journals and 42 book chapters or other single scientific or popular publications. The publications in journals were to 46% in journals listed with impact factors in Web of Science, and another 8% were in journals deemed as quality journals by the Norwegian Register for Scientific Journals, Series and Publishers. ISP was acknowledged in 32% of the chemistry journal publications, in 9% of the mathematics, and in 37% of the physics ones, respectively. There were 439 contributions to scientific conferences, 132 to international conferences (87% oral), 185 to regional and 122 to national/local conferences, 88% and 71% of them oral, respectively. Groups and networks arranged 74 scientific meetings attended by close to 6,000 participants.

Research findings

In the field of chemistry, several examples of research findings are given.

Results based management logical framework performance indicators

ISP’s results based management logical framework was established in 2012 and refined in 2013, along with 24 outcome performance indicators linked to three specific objectives. Sida has selected ten of the indicators for their monitoring of the performance of the program. Only those are provided in this summary:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average 2008-13</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of applications granted in relation to submissions. (Table 6b)</td>
<td>135/138 (98%)</td>
<td>24/27 (89%)</td>
<td>17/17 (100%)</td>
<td>20/20 (100%)</td>
<td>20/22 (91%)</td>
</tr>
<tr>
<td>ISP scientific reference group rating of applications. (&quot;Degree of excellence&quot;; Table 6c)</td>
<td>54%</td>
<td>59%</td>
<td>60%</td>
<td>55%</td>
<td>60%</td>
</tr>
<tr>
<td>Proportion of PhD students that are continuing/graduating each year. (Table 7i)</td>
<td>81%</td>
<td>86%</td>
<td>86%</td>
<td>92%</td>
<td>95%</td>
</tr>
</tbody>
</table>
**Analysis of key results**

Most results represented by the RBM performance indicators are fairly stable over the years, for reasons discussed in the Annual Report 2015. A few, however, show a development between years, that might make up emerging trends. Only such, that are selected by Sida, are commented here.

The proportion of PhD students continuing or graduating each year (indicator i) shows a steady increase since the previous period.

The gender proportion of the staff (indicator g) essentially remains the same as in the previous Sida agreement period with ISP, 2008-2013. Considered separately, however, it can be concluded that in particular a number of chemistry partners show gender parity.

The gender proportion of all students (indicator h1) shows more of development. In all three programs, there has been a modest increase in the share of female MSc and PhD students among those reported to ISP, although less accentuated in chemistry students, already with around 40% females since the previous period. The share of females among mathematics and physics PhD students is in 2017 more than 20%, while closer to 15% earlier years. In the same period, female shares of MSc students have increased from about 20% to close to 30%.

The number of publications, and proportion in “Web of Science”-indexed journals (indicator n) has developed in terms of numbers, and doubled since the previous period, while the share of publication in Web of Science-indexed journals has remained the same. There is a risk that “predatory publishers” are “facilitating” publication of results, in the absence of strict peer-review processes. The share of “quality publications” is not declining, and, therefore, also shows an increase in numbers.

The number of MSc graduations per year (indicator p) and the number of PhD graduations per year (indicator q) have almost tripled since the previous period, and the share of females of graduates almost doubled. The increasing numbers may be due to an increasing capacity for local PhD training, with an increasing number of PhD graduates among partners, but there may be other explanations as well, such as starting support in environments where local PhD programs are already at hand, and where a higher proportion of females is already settled.

Regarding the number of outreaching activities performed (indicator s), there might be a tendency that an increasing share of partners are reporting outreaching activities each year, from 2014, but the number of such activities reported doesn’t increase over the years.

Regarding the number of and nature of honors (indicator t), many of the achievements are difficult to attribute to ISP, because they reflect the individual abilities. To a degree, however, the development of these abilities might have been facilitated by the attachment to an ISP-supported research group or scientific network.
Regarding the number of instances when research results or skills is used by society (indicator u), the quantitative results are quite variable, and poorly reflect the qualitative nature of the reported “use”.

**Expenditures by research groups and networks**

Together, research groups and scientific networks spent close to 27 million SEK. Groups accounted for 62% and networks for 38% of the total expenditures, together using 87% of the financial resources available (including balances brought forward from 2016, making up 12% of available funding). In total, 51% of allocations were transferred for local management and use, and ISP paid 49% to other recipients on request.

**Other Activities and Events (Section 7)**

**Sida assignments**

ISP had Sida coordination assignments in the bilateral programs with universities in Ethiopia, Mozambique, Tanzania, and Uganda. In addition, ISP was engaged to pay subsistence allowances to Sida bilateral students from Bolivia, Ethiopia, Rwanda, Tanzania, and Uganda, while in Sweden. In November, Sida and ISP jointly organized a seminar at Sida, directed to students in bilateral and ISP programs.

**Strategic activities**

Following the Strategic Plan 2013-2017, each year a strategy action plan is established. In 2017, strategic activities addressed five areas; 1) Continued work to promote gender equality; 2) Evaluation and follow-up; 3) Information and communication; 4) Fund raising and other supplementary funding; and 5) Scientific capacity enhancement.

**Collaboration**

In the collaboration with:

- Al Baha University, Saudi Arabia; two visits by Uppsala University staff was carried out. The agreement expired 31 January 2017, but a no-cost extension was requested by ABU.
- Linköping University in the support to Research Management in Sida’s bilateral program with University of Rwanda (UR); ISP arranged for one week of training of PhD supervisors.
- The Faculty of Science, Stockholm University (SU); the steering group met in May to discuss the activities funded by SU.
- Thailand Research Fund and Thailand International Development Cooperation Agency; Following a second call, three fellows were selected, two female and one male, all from Myanmar.

**Dissemination**

Rebecca Andersson, together with former staff member Marta Zdravkovic, published a printed report on “The International Science Programme in Sri Lanka and Thailand: Three decades of research cooperation”, and a report on “Phased out groups and networks 2003–2014” was published on the web.

Two staff members presented ISP at three conferences, one in Ethiopia, one in the Netherlands, and one in Zimbabwe.
**Minor Field Studies**

From 2017, the application and administration processes of Minor Field Studies (MFS) fellowships are centralized at all Swedish universities, and ISP no longer directly awards such scholarships. However, ISP staff participates in review of applications at both the faculty and central level of Uppsala University.

**Seminars, meetings, visits**

ISP arranged six seminars and other meetings, including major staff meetings. Staff members gave 5 invited talks, and participated in 24 additional meetings, which included bringing students from five countries to the Nobel price award ceremony in Stockholm in December. At six instances, ISP received or participated in the reception of visiting scientists or delegations.
SECTION 2: ORGANISATION

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Sida Agreement: Contribution ID 54100006
SECTION 3: OBJECTIVES, OPERATION AND IMPACT

3.1 ISP's Objectives

To contribute to the development of active and sustainable environments for higher education and scientific search in developing countries, within chemistry, mathematics, and physics, with the ultimate goal to increase the production and use of results relevant for the fight against poverty by researchers in the basic sciences in developing countries.

According to ISP’s Strategic Plan 2013-2017:

ISP contributes to the creation of new knowledge to address development challenges.

The ISP vision is to efficiently contribute to a significant growth of scientific knowledge in low-income countries, thereby promoting social and economic wealth in those countries, and, by developing human resources, in the world as a whole.

In support of this vision, the overall goal of ISP is to contribute to the strengthening of scientific research and postgraduate education within the basic sciences, and to promote its use to address development challenges.

ISP therefore has the general objective to strengthen the domestic capacity for scientific research and postgraduate education, by long-term support to research groups and scientific networks in these fields.

The expected outcome for supported partners in low-income countries is scientifically stronger, more resourceful research environments, better-qualified postgraduates, and the increased production and use of high quality scientific research results.

The expected outcome for collaborating hosts to ISP-supported partners is an expanded global perspective, an enhanced awareness and knowledge of the potentials, conditions, and relevant issues of research collaboration with low-income countries, and an increased collaboration with scientists in those countries.

To achieve its general objective, ISP defines three specific objectives, to be achieved on the level of the supported collaboration partners:

1) Better planning of, and improved conditions for carrying out, scientific research and postgraduate training.

2) Increased production of high quality research results.

3) Increased use by society of research results and of graduates in development.

These objectives constitute the basis for ISP’s logical framework in the results based management (RBM) system introduced in 2013. The program logic, first published in ISP’s Strategic Plan 2013-2017, was refined in November 2013 and the current version is given in the ISP Annual Report 2013. In 2014, the monitoring and evaluation system continued to be developed correspondingly, and the data sources for the performance indicators were reviewed. In the Annual Report 2015, the first comprehensive presentation of the RMB-indicators was given, and it is here completed with the data of 2016 and 2017. (See Section 5.2.2).

3.2 ISP’s Method of Operation

ISP provides support for the development of active, productive, and sustainable research and higher education in the basic sciences physics, chemistry, and mathematics in low-income countries. The support is collaborative and long-term, and is managed on a collegial scientist-to-scientist basis with a strong local ownership. Support is provided to institutionally based research groups, and to scientific networks to facilitates cooperation and sharing of resources. The work is carried out in close cooperation with researchers at more resourceful host institutions. The program is maintained by Uppsala University, but ISP is a truly international program. Host institutions for “sandwich” students and collaboration may be located at other Swedish universities, in other Nordic and European countries, or in the regions.

The operation of ISP is regulated in an ordinance established by the Swedish government in 1988 (UHÄ-FS 1988:18; SFS 1992:815), through the then Office of Universities and Higher Education (Universitets- och högskoleämbetet; UHÄ). The ordinance requires the University Board to give notice on additional directions needed for the operation of the program. These are established in the Instruction, latest revised and decided by the Vice Chancellor 22 March 2016 (http://www.isp.uu.se/about-isp/board/).

The scope of the revised instruction was reduced in relation to the earlier version, and the duties of the Executive Committee to the Board were omitted. They are from now on the responsibility of the Board to decide. Therefore, in the meeting of the ISP Board 13 June 2016, a new Rules of Procedure regulation was decided, to complement the Instruction in this respect.

3.3 Impact of ISP Support on Development

ISP has strengthened scientific capacities in countries with weak scientific infrastructure since 1961. Rapid human and societal development around the globe requires scientific research of high quality to be successful.

3.3.1 ISP and the SDGs

Through ISP’s capacity building work and support to research of relevance to development challenges, ISP is contributing to SDG 17 - Partnership for the Goals. More specifically target 17.9 aiming to “enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation”.

In 2017, ISP-supported research groups and networks have, with their research and competence, contributed in several ways to achievements towards the SDGs. Examples include:

**Chemistry Burkina Faso.** An ISP supported chemistry network (IPICS RABiotech) laboratory (CRSBAN) at University of Ouagadougou is chosen by the Government of Burkina Faso as a Center of Reference and Control for nutritional issues. The overall goal of the network is to improve the nutritional status of the Sub-Saharan African population, with special emphasis on vulnerable groups. Among other things, CRSBAN was requested by the government to elaborate on the national strategic plan of nutrition in Burkina Faso. CRSBAN has also signed two agreements with Nestle to follow its program Healthy Kids in primary school and to sensitize the population on the aspect of quality of nutrition.
Physics Bangladesh. Through self-developed software and hardware, an ISP supported research group at Dhaka University (IPPS BAN:04) has set up telemedicine health care centers - using modern communication technology - to provide access to clinical health care and medical services to people in rural areas. The number of centers increased from 5 in 2015 to 30 in 2017, with the help of UNDP funding. About 4000 medical consultations with prescriptions were made to patients in rural areas through these telemedicine centers. In addition, through the field trial of a mobile phone based version of the same, female telemedicine operators went from door to door allowing patients in remote rural areas to consult city doctors right from their homestead. During four months in 2017, such consultations were provided to about 700 patients (95% women, children and elderly). Thus, catering to primary and secondary healthcare needs in the villages, where there are no doctors, the telemedicine program has been able to at least reduce the complications that one would face had the primary and secondary care not been available near home.

Mathematics Uganda. The results of infectious-disease modeling of malaria, HIV, hepatitis E, and sleeping sickness carried out by a scientific network (IPIMS EAUMP) node at Makerere University, have been utilized by the Ugandan Medical Research Council to advice on the best investment strategy to fight infectious diseases.

Chemistry, Physics and Mathematics. Members of supported research groups and networks are contributing to increasing the quality of research and higher education at their departments. In addition, they continuously organize and participate in science workshops, training courses and science camps for both high school teachers and students aiming to increase the quality of teaching and education in the fields of chemistry, mathematics and physics.

Physics Mali. An ISP supported physics group (IPPS MAL:01) at University of Sciences, Techniques and Technologies of Bamako, graduated the first female PhD student in physics in the country. The ministry of Education attended the thesis defense in order to promote gender mainstreaming in physical science.

Physics Kenya. An ISP supported research group (IPPS KEN:01/2) at University of Nairobi has started the initiative “The Women in Physical Science in Kenya”. In 2017, they visited and talked to three secondary school girls during their career days. Another ISP supported physics group (IPPS KEN:04) at the same university has provided mentorship and career guidance to Kenya Girls High School students through organized learning and career talk visits to high schools.

Chemistry Uganda. By invitation, group members of an ISP supported research group (IPICS UGA:01) at Makerere University have assessed the current environmental conditions in an important wetland on the edge of Lake Victoria (Lutembe Bay Ramsar site) focusing on human caused pesticide exposure. The reports will be a basis of the government policy in streamlining the management of beaches along water bodies of Uganda.

Chemistry Bangladesh. There was an incident of death of fish, ducks, frogs and fowls in a flash flood affecting areas of Sunamgonj in Bangladesh. The former group leader of the ISP supported chemistry group (IPICS BAN:04) at Dhaka University was in the fact-finding Committee formed by the Bangladesh Chemical Society. She visited the area with Committee members and collected samples and investigated.
Later, she revealed the finding in a press conference and the news was published in a daily newspaper.

**Physics Zimbabwe.** As a community outreach initiative, an ISP supported research group (IPPS ZIM:01) at University of Zimbabwe sited a borehole for Elitsheni Primary School, a marginalised school situated in the drought prone Matebeleland South province.

**Physics Kenya.** Several members of an ISP supported physics group (IPPS KEN:02) at University of Nairobi have participated in curriculum development and review in solar photovoltaic system for the government. Group members have also installed solar photovoltaic system in ten sites including one secondary school, the total capacity of installed systems being 2.5 KW.

**Physics Burkina Faso.** The ISP supported physics research group (IPPS BUF:01) at University of Ouagadougou participated in the activities of the Ministry of Energy, such as the organization of the Renewable Energy Week, and on the validation of certain policy texts.

**Addressing Food Safety in Bangladesh**

Dr Mohammad Shoeb is heading the ISP supported chemistry research group (IPICS BAN:04) at Dhaka University, working to ensure safe food and environment in Bangladesh. Food safety is a burning issue in the country due the use of unauthorized toxic chemicals in food production, processing, preservation and storage - putting both farmers and consumers at risk. The country has signed the Stockholm Convention on Persistent Organic Pollutants (POPs), aiming to restrict and ultimately stop the production and use of them.

- We are testing the levels of POPs in different fruit, fish, and vegetables sold on markets in Bangladesh. Different chemicals are used for different foods; therefore, we constantly need to develop new testing methods. Currently we are working on how to identify toxins inserted into watermelon, used to enhance their color.

To make a difference, Dr Shoeb points to the importance of informing and influencing policy makers, through dissemination of research findings. The group has had the opportunity to contribute to the Bangladesh Food Act 2013, which now is a food safety law ensuring people’s right to access safe food. The group was also part in the creation of the Formalin Control Act 2015, a licensing system for the import and use of Formalin, used to preserve fresh food in Bangladesh.

*We try to increase the awareness and spread knowledge on the hazards of pesticide use through organizing workshops and seminars with farmers and the public, as many are unaware of the effects they have on the health and the environment. Take DDT as an example - initially we don’t know the effects of using it, now we know. Our group is working to spread such knowledge.*
3.3.2 Continued work to promote gender equality

Considering the very good quality of many of the applications ISP has received for the Gender Equality Activity Grant (2015), the very good activities realized by these funds and the promotion of the gender main streaming working method implemented by Sida, ISP realized that it is important to support this kind of activities in a sustainable way. For this reasons ISP decided to include in the project applications of 2017, the possibility to apply for (ear-marked) extra funds (max 30 000 SEK/year) for gender activities running during the three-year grant period, mostly for IPPS and IPMS groups and networks. In this way, the support to gender projects can be guaranteed in a more continuous way, improving sustainability of the suggested and implemented changes. Of 13 applications within the Physics Programme, 6 groups applied for gender funds. We granted the following IPPS supported groups and network: MSSEESA; BAN:04, KEN:01/2, KEN:04 and MAL:01. Moreover, ISP sponsored many of the activities at Makerere University, as continuation of the initial Gender Equality Activity grant won by Dr Betty Nannyonga in 2016.

We summarize in the following, the activities which have been funded by the gender equality grants during 2017.

**Bangladesh**

IPPS BAN:04: Prof. Siddique e-Rabbani, leader of IPPS BAN:04 applied for institutionalizing a PhD position for female candidates. He hopes that this external-funded PhD position will permit the female students to work part-time, allowing them to harmonize work and family duties. He has entitled the new PhD position ‘Marie Curie Research Scholarship’. The position has been assigned to Ms. Rashida Haque in a ceremony (6 August 2017) where the Pro Vice Chancellor and Dean of Science were special guests. The awardee got a certificate and a crest.

![Award ceremony of the Marie Curie PhD scholarship granted to Ms. Rashida Haque at University of Dhaka. Courtesy of IPPS BAN:04.](image-url)
Kenya
IPPS KEN:01/2: A forum under the name “Women in Physical Sciences” was launched under the leadership of Ms Lindah K. Kirinya (Chair Lady) and Susan W. Karuga (Secretary). The forum invited girls from other public universities. Two successful meetings were held. In their discussions, they agreed the best strategy was to motivate and encourage girls from secondary schools to take science subjects and join physical sciences in the university while they should continue to meet to encourage each other through meeting and invited professional and motivational talks from peers. Three girl’s secondary schools were visited, in Kiambu, Tharaka Nithi and Meru counties and the consequent verbal feedback was very encouraging. However, we are yet to receive the feedback in writing from Head Teachers or Career Masters as promised.

IPPS KEN:04: We had a holiday internship program for undergraduate female students. The program was to run for seven weeks. The students were competitively selected through a series of interviews among female students taking physics in the first, second and third years. Students from the B.Sc. (Physics), B.Sc. (Astronomy) and B.Sc. (Microprocessor Technology & Instrumentation) program were eligible to apply for the program. Seven students were selected (with two sponsored by one of the staff members) and each was allocated a project under supervision of an academic member of staff. Additional support was provided by technical staff. The internship ran for about 4 weeks but was disrupted when industrial action by all university staff countrywide led to closure of our campus. The university was also closed for long periods (under government instructions) due to the general elections. This means that we had to cancel the program (after four weeks) before the students could finish their projects. However, the mentoring relationships that were formed between students and academic/technical staff continue to date. Some really promising students were identified. These students will be encouraged to pursue postgraduate studies.

Students at the Holiday Internship, University of Nairobi. Courtesy of IPPS KEN:04.

Tanzania
IPPS MSSEESA: In December, Margaret Samiji (IPPS MSSEESA) and Eunice Mureithi (IPMS EAUMP; Univ. Dar es Salaam) organized the second Science Camp, for female A-level students from Tambaza, B.W. Mkapa, Temeke, and Makongo High Schools, to familiarize with science. The goal is to improve the admission rate for female students to university scientific programs. Already after the first Camp a total of eight students performed very well in their final examinations and joined high learning institutions in Tanzania.
**Uganda**

IPMS EAUMP: Dr Betty Nannyonga at Makerere University organized on 2-3 May the third of the series of workshop for undergraduate student. This is one of the biggest event beside the seminar and the career days which are also organized at the same site by Betty Nannyonga. The Workshop with title: "Where are we now/Way forward", was a Math School with invited speakers from Uganda and Nairobi. A total of 30 speakers confirmed attendance including three Principals, three Deans, two heads of departments, key gender facilitators, and staff of the Department of Mathematics. In total 430 students registered.

To this school also Priscilla Muheki from MUST, Mbarara (Uganda) Alix Dehayem and Ruth Wanbwile from Nairobi participated, sponsored by ISP. This means that the network of female scientists and students started with the summer school at UU last year, is still alive and active.

The results of these two years of activity:
- Female Empowerment: The College of Natural science is run for the first time, by female students who won the post as President and Vice President.
- More female majors in mathematics and physics. At the third year of education, more than 18 math/physics majors from less than five one year ago. These female students have also shown interest to continue with graduate studies.
- In the second year, over 40 students have expressed interest to major in mathematics/physics.
- Better collaboration between Mathematics and Physics Departments

The School of Physical Sciences (CONAS), in conjunction with the School of Women and Gender Studies (CHUSS) organized a Science Students Gender Awareness Training on 6 November. The overarching objective of the training was to enlighten science students on how gender construction influences their identity and sense of achievement. This training is vital in strengthening, mentoring and supporting the success and retention of women in sciences. A total of 400 students and over 10 facilitators attended the workshop.

IPPS UGA:02: Another supported activity was to facilitate the participation of Priscy Myheki to an astronomy school in Addis Ababa. Priscilla got a baby at the end the last year and ISP funded the travel of one of Priscilla’s family member for facilitating the baby care during the school.
SECTION 4: STRUCTURE

The International Science Program (ISP) is a unit at the Faculty of Science and Technology at Uppsala University and consists of three subprograms:

- International Programme in the Physical Sciences (IPPS, since 1961)
- International Programme in the Chemical Sciences (IPICS, since 1970)
- International Programme in the Mathematical Sciences (IPMS, since 2002)

In 2017, ISP was operated on contributions from the following sources:

- Swedish International Development Cooperation Agency (Sida) 31,000,000 SEK
- Uppsala University, Faculty of Science and Technology 2,850,000 SEK
- Stockholm University, Faculty of Science 1,000,000 SEK

All contributions are imperative to the operation and development of ISP, and indispensable to the efforts of ISP's partners producing a multitude of results, and the contributions are gratefully acknowledged. Comprehensive financial reports are provided separately to each funding entity. The use of funds is subject to external audit following the terms of reference given in the agreement with Sida.

Below, the governing and advisory bodies of ISP are given, and the ISP staff 2017.

4.1 The ISP Board

The Board, appointed for the period 1 April 2016 to 31 March 2018, had the following composition (31% female, 69% male, including deputies):

- Professor Johan Tysk (M), Vice-Rector, Uppsala University (Chairperson)
- Professor Kersti Hermansson (F), Dept. Chemistry-Ångström, UU (Vice Chairperson)
- Ms Agne Ciuciulkaite (F), representative of the student organisations, Uppsala University (from 4 December)
- Professor Elzbieta Glaser (F), Dept. Biochemistry and Biophysics, Stockholm University
- Professor Giulia di Nunno (F), Department of Mathematics, University of Oslo, Norway.
- Dr Hans Corell (M), Ambassador (ret.), Former Under-Secretary-General for Legal Affairs and the Legal Counsel of the United Nations (from 23 May)
- Mr Kay Svensson (M), Deputy University Director, Uppsala University
- Professor Lars Österlund (M), Dept. Engineering Sciences, Uppsala University
- Professor Maciej Klimek (M), Dept. Mathematics, Uppsala University
- Professor Mohamed Garib Bilal (M), The Nelson Mandela African Institution for Science & Technology, Arusha, Tanzania.
- Professor Mohamed H.A. Hassan (M), The Global Network of Science Academies (IAP)
- Professor Olle Inganäs (M), Dept. Physics, Chemistry and Biology, Linköping University
- Dr Peter Roth (M), representative of the personnel unions, Uppsala University

Deputy Board members, Uppsala University:

- Professor Fan Yang Wallentin (F), Dept. Statistics, Uppsala University
- Professor Jonas Bergquist (M), Dept. Chemistry, Uppsala University
- Professor Vernon Cooray (M), Dept. Engineering Sciences, Uppsala University

In 2017, the Board had two votes per capsulam, in April and June, and a regular meeting 15 December.
4.2 The ISP Executive Committee

The ISP Executive Committee is a standing working committee to the Board. It met 14 February, 6 June, 5 September, and 5 December, and had the following composition (14% female, 86% male), all Uppsala University staff:

- Professor Kersti Hermansson (F), Dept. Chemistry-Ångström, Chairperson
- Professor Lars Österlund (M), Dept. Engineering Sciences, Vice Chairperson (from 1 April)
- Associate Professor Ernst van Groningen (M), Director of IPPS
- Mr Kay Svensson (M), Deputy University Director (from 13 February)
- Dr Leif Abrahamsson (M), Director of IPMS
- Professor Maciej Klimek (M), Dept. Mathematics
- Associate Professor Peter Sundin (M), Director of IPICS

4.3 The ISP Scientific Reference Groups

The International Programme in the Chemical Sciences (IPICS)

The IPICS scientific reference group had its annual meeting in Cape Town, Republic of South Africa (RSA), 16-19 October. It had the following composition (33% female, 67% male):

- Professor Charlotta Turner (F), Lund University, Lund, Sweden
- Professor Henrik Kylin (M), Linköping University, Linköping, Sweden
- Professor Iqbal Parker (M), Intl. Ctr. Genetic Engineer. Biotechnol., Cape Town, RSA
- Professor James Darkwa (M), University of Johannesburg, Johannesburg, RSA
- Professor Jenny Ruales (F), Escuela Politecnica Nacional, Quito, Ecuador
- Professor Lars Ivar Elding (M), Lund University, Lund, Sweden
The International Programme in the Mathematical Sciences (IPMS)

The IPMS scientific reference group had its annual meeting in Livingstone, Zambia, 9-11 October 2017. It had the following composition (25% female, 75% male):

- Professor Christer Kiselman (M), Uppsala University, Uppsala, Sweden
- Professor Fanja Rakotondrajao (F), Univ. Antananarivo, Antananarivo, Madagascar
- Professor Mohamed El Tom (M), Garden City Coll. Sci. Technol., Khartoum, Sudan
- Professor Tom Britton (M), Stockholm University, Stockholm, Sweden

The International Programme in the Physical Sciences (IPPS)

The IPPS scientific reference group had its annual meeting in Uppsala, Sweden, 5-6 October, 2017. It had the following composition (20% female, 80% male):

- Professor Ewa Wäckelgård (F), Uppsala University, Uppsala, Sweden
- Professor Krishna Garg (M), University of Rajasthan, Jaipur, India
- Professor Magnus Willander (M), Linköping University, Linköping, Sweden
- Professor Roland Roberts (M), Uppsala University, Uppsala, Sweden
- Professor Malik Maaza (M), iThemba Labs, Cape Town, South Africa.

One position as physics reference group member was still vacant in 2017.
4.4 The ISP Staff

In 2017, ISP had the following staff members (51% female, 49% male; Full time if not otherwise indicated, gender balance count takes into consideration part-time employment and employment duration in the year).

Core scientific staff

- Assoc. Prof. Peter Sundin (M), Head of ISP, Director of IPICS.
- Dr. Leif Abrahamsson (M), Deputy Head of ISP, Director of IPMS.
- Assoc. Prof. Ernst van Groningen (M), Director of IPPS.
- Assoc. Prof. Carla Puglia (F), Assistant Director of IPPS (65%).
- Assoc. Prof. Cecilia Öman (F), Assistant Director of IPICS (50%).

Administrative staff

- Ms. Aksana Mushkavets (F), Administrator (until 31 August).
- Ms. Anna Wallin (F), Economy Administrator.
- Ms. Archana Yadav Ganganaboina (F), Economy Assistant (from 15 August).
- Mr. Hossein Aminaey (M), Administrator
- Dr. Peter Roth (M), Head of Administration, Economist.
- Ms. Pravina Gajjar (F), Administrator (80%).
- Ms. Therese Rantakokko (F), Administrator
- Dr. Tore Hällander (M), Economy Administrator (until 30 June)
- Ms. Ulrika Kolsmyr (F), Economy Assistant (from 1 September))

Other staff

- Assoc. Prof. Olle Terenius (M), Coordinator (50%).
- Ms. Rebecca Andersson (F), Project Manager, Communications Officer.
5.1 Activities

In 2017, 40 research groups and 20 scientific networks were supported (Sections 5.1.1 and 5.1.2, respectively). Support was initiated to one national chemistry network, CAB-CCS, in Cambodia, and none was concluded.

5.1.1 Research Groups

In 2017, totally 40 research groups were supported (Tables 1 and 2), 19 in chemistry, one in mathematics, and 20 in physics. In nine of the twelve Swedish focus countries² totally 33 research groups were supported (Table 1). Seven research groups were supported in three non-focus countries (Table 2).

Research groups supported in Swedish focus countries

<table>
<thead>
<tr>
<th>Country</th>
<th>IPICS</th>
<th>IPMS</th>
<th>IPPS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>2</td>
<td>3</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>2</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Cambodia</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Kenya</td>
<td>2</td>
<td>5</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Mali</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Rwanda</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Uganda</td>
<td>2</td>
<td>2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Zambia</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>1</strong></td>
<td><strong>17</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

In **Bangladesh**, a research group at Dept. Chemistry, Univ. Dhaka (IPICS BAN:04) was supported in the field of environmental and food contamination chemistry, and one at the Daffodil International University, Dhaka, in the field of safety of herbal medicines (IPICS BAN:05).

Research collaboration between Bangladesh Univ. Engineering and Technology (BUET) and the Atomic Energy Centre, Dhaka, (AECD) was supported in the field of magnetic materials (IPPS BAN:02). Support in medical physics was provided to a group at the Dept. Biomedical Physics & Technology (IPPS BAN:04), and to a group in the field of nanophysics at the Dept. Physics, both at Univ. Dhaka (IPPS BAN:05).

In **Burkina Faso**, two research groups at the Dept. Chemistry, Univ. Ouagadougou, were supported, one on natural products research (IPICS BUF:01) and one on clay mineralogy (IPICS BUF:02). Support to the Department of Physics was given in the area of energy effective buildings (IPPS BUF:01).

In **Cambodia**, a research group at the Dept. Physics (IPPS CAM:01) at the Royal Univ. Phnom Penh (RUPP) was supported, and a research group at the RUPP Dept. Chemistry, in the field of environmental chemistry (IPICS CAB:01).

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² Swedish focus countries are defined as those given by the “government’s new development policy”, announced in 2007. See ISP’s Strategic Plan 2013-2017 for more detailed information.
On request by Sida, and in preparation for their new bilateral program on scientific research cooperation planned to start at RUPP in 2018, ISP’s Board agreed to grant one year of pilot support to the RUPP departments of Biology and Environmental Science, respectively, to allow for staff members to visit Sweden and seek collaborators. Support to the RUPP Dept. Math. was granted for the same purpose in 2017, besides the network support through SEAMaN.

Sampling at the upper Mekong from Lao, entrance to Cambodia. Courtesy of IPICS CAB:01.

In Ethiopia, chemistry and physics support was provided to four research groups at Addis Ababa Univ. (AAU), at the Depts. Chemistry and Physics. Two were working on conducting polymers with photovoltaic applications (IPICS ETH:01 and IPPS ETH:01), one on environmental chemistry (IPICS ETH:04) and one in the field of seismology (IPPS ETH:02). Support was also continued to the AAU Dept. Mathematics (IPMS ETH:01).

At the School of Pharmacy, AAU, a group working in the field of pharmacological chemistry (IPICS ETH:02) was supported.

In Kenya, five physics research groups were supported. Four of these are at Univ. Nairobi (UoNBI), and one is at the Univ. Eldoret. They work in the fields of X-ray fluorescence (IPPS KEN:01/2), nanostructured solar cells (IPPS KEN:02), photovoltaics (IPPS KEN:03), applied laser physics (IPPS KEN:04), and seismology (IPPS KEN:05). Support was provided also to two research groups at the Dept. Chemistry, UoNBI, in the fields of coordination chemistry (IPICS KEN:01) and natural products chemistry (IPICS KEN:02).

In Mali, at Université des Sciences, des Techniques et des Technologies de Bamako, a research group on clay mineralogy was supported at Dept. Chemistry, (IPICS MAL:01), and a research group in the field of spectral imaging (IPPS MAL:01) at the Dept. Physics.

In Rwanda support to a chemistry research group in the field of environmental chemistry (IPICS RWA:01), and a physics research group in the field of Astrophysics and Atmospheric Physics (IPPS RWA:01), both at University of Rwanda, was continued.

In Uganda support was provided to a research group in physics (IPPS UGA:01/1) at Makerere Univ., in the field of materials science, and to a research group in astronomy and space science at the Mbarara University of Science and Technology (MUST), Mbarara (IPPS UGA:02).

In chemistry, support was continued to the IPICS UGA:01 group, at Makerere Univ. Dept. Chemistry, conducting research in the field of environmental chemistry. ISP support originally started 1999, but was interrupted 2009-2014 while the group received support through the Sida bilateral program with Makerere Univ. Similarly, support to IPICS UGA:02 was continued. The group was originally supported by ISP from 2003, and then by Sida 2009-2014.
In Zambia, at Univ. Zambia, a research group at the Dept. Physics was supported in the field of materials science (IPPS ZAM:01), and a research group at the Dept. Chemistry, in the field of conducting polymers (IPICS ZAM:01).

Table 2. Number of research groups supported in Swedish non-focus countries using funding from Stockholm University (in Laos, and partly in Zimbabwe) and Sida (in Zimbabwe)

<table>
<thead>
<tr>
<th>Country</th>
<th>IPICS</th>
<th>IPMS</th>
<th>IPPS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laos</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>3</td>
<td></td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

In Laos, two research groups were supported at the Natl. Univ. Laos (NUOL), one in environmental chemistry at the Dept. Chemistry (IPICS LAO:01), and one in geoscience at the NUOL Dept. Physics (IPPS LAO:01), both using funding provided by Stockholm University (SU).

In Myanmar, at Univ. Mandalay, support was provided to a physics research group, working in the fields of experimental and theoretical nuclear physics, and materials science (IPPS MYA:01).

In Zimbabwe, three chemistry research groups were supported. One works in the field of pharmacokinetics-pharmacodynamics, at the African Institute of Biomedical Science and Technology (IPICS ZIM:AiBST), Harare (associated with Univ. Zimbabwe). Another group is working in the field of biomolecular interactions (IPICS ZIM:01), at the Dept. Biochemistry, Univ. Zimbabwe, Harare. The third is working in the field of biochemical toxicology (IPICS ZIM:02), at the Dept. Environmental Science and Health, National Univ. Sci. Technol. (NUST) in Bulawayo.

In physics, support was provided to a research group at NUST in the field of geophysics and ground water studies (IPPS ZIM:01).

5.1.2 Scientific Networks

In 2017, totally 20 scientific networks were supported (Table 3), 11 in chemistry, three in mathematics, and six in physics.

Scientific networks in the field of chemistry

ANCAP - African Network for the Chemical Analysis of Pesticides, with the objective to safeguard public health and the environment, and ensure the safety of African agricultural and aquatic products.

ANEC - African Network of Electroanalytical Chemists, with the objective to foster research activities in the field of electroanalytical chemistry among African scientists, and to promote and encourage the use of electrochemical approaches in African basic science as well as applications in environmental sciences and food security.

ANFEC - Asian Network of Research on Food and Environment Contaminants. This network builds on the progress facilitated by the ISP support to environmental chemistry in the region, and to further develop the capacity for reliable trace analysis of pollutants.

ANRAP - Asian Network of Research on Antidiabetic Plants, with the objective to develop cooperation between scientists working in the field of antidiabetic plant research.

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3 For more details of ISP's support to scientific networks, see Kiselman, C. (2011); http://uu.diva-portal.org/smash/record.jsf?pid=diva2:393463&rvn=1
ANEC committee board received by the Director general of research (white dressed) of the ministry of higher education and research of Senegal. Courtesy of IPICS ANEC.

ANEC committee board meeting. Courtesy of IPICS ANEC.

**CAB-CCS - Cambodian Chemical Society**, has the overall goal to enhance chemistry education in high school by training the capacity and skills on chemistry experiments’ handling to the provincial high school teachers. It is an outreach link between the Dept. Chem. at RUPP and high school chemistry teacher, initiated by staff at the Royal Academy of Cambodia and at the RUPP Dept. Chem, and previous years organized at the IPICS CAB:01 group. From 2017, this national network was detached from the chemistry research group in preparation for the transfer of the latter to Sida bilateral funding.

**LANBIO - Latin American Network for Research in Bioactive Natural Compounds**, with the objective to provide the conditions for developing a sustainable research group in Ecological Chemistry in Bolivia, producing high quality basic science around problems of local relevance involving chemical and ecological studies of natural resources.

**NABSA - Network for Analytical and Bioassay Services in Africa**, with the objective to give other African scientists access to the analytical and laboratory facilities and equipment that exist in the Dept. Chem., Univ. Botswana.
NAPRECA - Natural Products Research Network for Eastern and Central Africa, with the objective to initiate, develop and promote research in the area of natural products chemistry in Eastern and Central Africa.

NITUB - Network of Instrument Technical Personnel and User Scientists of Bangladesh, with the objective to improve the capabilities in handling, maintaining, trouble-shooting and repairing scientific instruments in Bangladesh.

RABiotech - West African Biotechnology Network, with the objective to ensure and reinforce research training in biotechnology, and to share research on local challenges.

SEANAC - African Network for Analytical Chemists (formerly Southern and Eastern Africa Network for Analytical Chemists), with the goal to promote analytical chemistry in the region.

Scientific networks in the field of mathematics

BURK:01 - PDE Modeling and Control, aiming at applications of mathematics, and strengthening other areas of mathematics. The cooperation is between Univ. Ouagadougou (Burkina Faso), Gaston Berger Univ. (Senegal), Univ. Nouakchott (Mauritania), Univ. Cocody-Abidjan (Ivory Coast), and Université des Sciences, des Techniques et des Technologies de Bamako (Mali).

EAUMP - Eastern Africa Universities Mathematics Programme, with the main objectives to enhance postgraduate training and build capacity in universities. The network consists of the Depts. Mathematics at Makerere Univ. (Uganda), Univ. Rwanda (Rwanda), Univ. Dar es Salaam (Tanzania), Univ. Nairobi (Kenya), and Univ. Zambia (Zambia).

SEAMaN - South East Asian Mathematics Network, with the objective to strengthen the postgraduate education in mathematics at the three member Departments of Mathematics, at the Natl. Univ. Laos, the Royal Univ. Phnom Penh, Cambodia, and the Univ. Mandalay, Myanmar.

Scientific Networks in the field of physics

AFSIN - African Spectral Imaging Network (AFR:04), with the objective to bring the members to international standard in the field of spectroscopy and spectral imaging, with applications in medicine, environment and agriculture.

EAARN - East Africa Astronomy Research Network (AFR:05). Support to this new network started in 2014. It is is coordinated from Mbarara Univ. Sci. Technol. (MUST) in Mbarara, Uganda. Nodes are at Busitema University (Uganda), the University of Addis Ababa (Ethiopia), and the University of Rwanda (Rwanda). Students from the nodes participate in the MSc program at MUST. The network plans to include other universities in the East African region.

ESARSWG - Eastern and Southern African Regional Seismological Working Group (AFR:01), with the objective to monitor seismic activities of the East Africa Rift System through operation of seismic stations in nine countries and collectively analyse data.

LAM - African Laser, Atomic, Molecular and Optical Sciences Network (AFR:02), with the objective to promote the physics of lasers, atoms and molecules, and their applications. (No allocation was awarded in 2017).

MSSEESA - Materials Science and Solar Energy Network for Eastern and Southern Africa (AFR:03), with the aim to use costly equipment in a more efficient way and to harmonize and strengthen the quality of physics education in the region.

NADMICA - Nature Induced Disaster Mitigation in Central America, with the objective to enhance research in natural disaster mitigation in Central America.
### Table 3. Number of scientific networks supported by ISP, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>IPICS</th>
<th>IPMS</th>
<th>IPPS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>6</td>
<td>2</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Asia</td>
<td>4</td>
<td>1</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Latin America</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11</strong></td>
<td><strong>3</strong></td>
<td><strong>6</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

### New scientific network support

In 2017, support to the Cambodian Chemical Society was continued in the form of a new network (IPICS CAB-CCS; details above; Table 4). It was previously supported through the chemistry research group IPICS CAB:01)

### Table 4. New scientific network support, started in 2017

<table>
<thead>
<tr>
<th>Country</th>
<th>ISP Code</th>
<th>Field of Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>IPICS CAB-CCS</td>
<td>Chemistry</td>
</tr>
</tbody>
</table>
5.2 Results and Expenditures

In 2017, ISP supported 40 research groups and 20 scientific networks, together spending almost 27 million SEK (Table 5). In total, 51% of allocations were transferred for local use, and 49% were payments to third parties. Groups and networks reported 442 PhD students (28% female) and 631 students (33% female) training for MSc, MPhil or Licentiate degrees. About 24% of the PhD students and 3% of the Master etc. students were in sandwich programs. In total, 90 PhD (38% female) and 258 MSc (etc.) students (39% female) graduated. Groups and networks disseminated almost 800 scientific papers as publications or at conferences, and arranged 74 meetings attended by close to 6,000 participants.

Table 5. Expenditures, number of ISP supported activities, students registered, and outcome in terms of student graduations and dissemination (L.Am. = Latin America). Achievements regards research groups and networks in the indicated regions.

<table>
<thead>
<tr>
<th>Expenditures by groups and networks (kSEK)</th>
<th>Africa</th>
<th>Asia</th>
<th>L.Am.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research groups (Detailed in Section 5.2.3)</td>
<td>11,733</td>
<td>4,864</td>
<td>N/A</td>
<td>16,597</td>
</tr>
<tr>
<td>Locally managed expenditures, %</td>
<td>49</td>
<td>55</td>
<td>-</td>
<td>51</td>
</tr>
<tr>
<td>ISP payment, %</td>
<td>51</td>
<td>45</td>
<td>-</td>
<td>49</td>
</tr>
<tr>
<td>Networks (Detailed in Section 5.2.3)</td>
<td>7,628</td>
<td>1,663</td>
<td>796</td>
<td>10,087</td>
</tr>
<tr>
<td>Locally managed expenditures, %</td>
<td>50</td>
<td>55</td>
<td>39</td>
<td>50</td>
</tr>
<tr>
<td>ISP payments, %</td>
<td>50</td>
<td>45</td>
<td>61</td>
<td>50</td>
</tr>
<tr>
<td>Total expenditures (Detailed in Section 5.2.3)</td>
<td>19,361</td>
<td>6,527</td>
<td>796</td>
<td>26,684</td>
</tr>
<tr>
<td>Locally managed expenditures, %</td>
<td>50</td>
<td>55</td>
<td>39</td>
<td>51</td>
</tr>
<tr>
<td>ISP payments, %</td>
<td>50</td>
<td>45</td>
<td>61</td>
<td>49</td>
</tr>
</tbody>
</table>

Number of Supported Activities

<table>
<thead>
<tr>
<th>Number of Supported Activities</th>
<th>Africa</th>
<th>Asia</th>
<th>L.Am.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Groups in Swedish Focus Countries</td>
<td>26</td>
<td>7</td>
<td>0</td>
<td>33</td>
</tr>
<tr>
<td>Research Groups in Non-Focus Countries</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Regional Scientific Networks</td>
<td>13</td>
<td>5</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Total number of activities (Detailed in Sect. 5.1.1 &amp; 5.1.2)</td>
<td>43</td>
<td>15</td>
<td>2</td>
<td>60</td>
</tr>
</tbody>
</table>

Students

<table>
<thead>
<tr>
<th>Students (Detailed in Section 5.3.2)</th>
<th>Africa</th>
<th>Asia</th>
<th>L.Am.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students registered for PhD (sandwich type; F/M)*</td>
<td>28/56</td>
<td>5/11</td>
<td>5/1</td>
<td>38/68</td>
</tr>
<tr>
<td>Students registered for PhD (local; F/M)</td>
<td>49/223</td>
<td>35/28</td>
<td>1/0</td>
<td>85/251</td>
</tr>
<tr>
<td>Percentage of PhD students that are female</td>
<td>22</td>
<td>51</td>
<td>86</td>
<td>28</td>
</tr>
<tr>
<td>Students registered for MSc, MPhil, or Lic. (sandw.; F/M)</td>
<td>2/11</td>
<td>0/3</td>
<td>0/0</td>
<td>2/14</td>
</tr>
<tr>
<td>Students registered for MSc, MPhil or Lic. (local; F/M)</td>
<td>105/252</td>
<td>97/155</td>
<td>3/3</td>
<td>205/410</td>
</tr>
<tr>
<td>Percentage of MSc students that are female</td>
<td>29</td>
<td>38</td>
<td>50</td>
<td>33</td>
</tr>
<tr>
<td>Total number of postgraduate students</td>
<td>726</td>
<td>334</td>
<td>13</td>
<td>1,073</td>
</tr>
<tr>
<td>Percentage of postgraduate students that are female</td>
<td>25</td>
<td>41</td>
<td>69</td>
<td>31</td>
</tr>
<tr>
<td>PhD graduations (&quot;sandwich&quot;/local; Section 5.3.2)</td>
<td>16/43</td>
<td>2/27</td>
<td>2/0</td>
<td>20/70</td>
</tr>
<tr>
<td>MSc/MPhil/Lic. grad. (&quot;sandwich&quot;/local; Section 5.3.2)</td>
<td>2/140</td>
<td>1/115</td>
<td>0/0</td>
<td>3/255</td>
</tr>
</tbody>
</table>

Publications (Detailed in Appendix 2)

<table>
<thead>
<tr>
<th>Publications</th>
<th>Africa</th>
<th>Asia</th>
<th>L.Am.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publications in quality scientific journals</td>
<td>141</td>
<td>16</td>
<td>10</td>
<td>167</td>
</tr>
<tr>
<td>Public. in other scientific journals</td>
<td>125</td>
<td>18</td>
<td>0</td>
<td>143</td>
</tr>
<tr>
<td>Books, Chapters, Popular Publ., Technical Reports, etc.</td>
<td>12</td>
<td>30</td>
<td>0</td>
<td>42</td>
</tr>
<tr>
<td>Total number of publications</td>
<td>278</td>
<td>64</td>
<td>10</td>
<td>352</td>
</tr>
</tbody>
</table>

Conference contributions (Detailed in Appendix 3)

<table>
<thead>
<tr>
<th>Conference contributions</th>
<th>Africa</th>
<th>Asia</th>
<th>L.Am.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Conference Contributions (oral/poster)</td>
<td>79/19</td>
<td>25/9</td>
<td>0/0</td>
<td>104/28</td>
</tr>
<tr>
<td>Regional Conference Contributions (oral/poster)</td>
<td>149/22</td>
<td>13/1</td>
<td>0/0</td>
<td>162/23</td>
</tr>
<tr>
<td>National Conference Contributions (oral/poster)</td>
<td>35/14</td>
<td>50/21</td>
<td>2/0</td>
<td>73/9</td>
</tr>
<tr>
<td>Total number of conference contrib. (oral/poster)</td>
<td>263/88</td>
<td>88/31</td>
<td>2/0</td>
<td>353/86</td>
</tr>
<tr>
<td>Total dissemination</td>
<td>596</td>
<td>183</td>
<td>12</td>
<td>791</td>
</tr>
<tr>
<td>Conferences/Workshops/Courses arranged</td>
<td>53</td>
<td>23</td>
<td>0</td>
<td>74</td>
</tr>
<tr>
<td>Number of participants reported (Detailed in App. 3)</td>
<td>4,808</td>
<td>1,161</td>
<td>-</td>
<td>5,969</td>
</tr>
</tbody>
</table>

*A few students are full-time with host supervisors. Those are not listed separately, but together with sandwich students to distinguish them from students trained locally.
5.2.1 Examples of Research Findings

**Bangladesh**

*(Environmental and contamination chemistry)*

In a study of pesticide residues in market vegetable samples cypermethrin and chlorpyrifos was detected at levels above the maximum residue level. (IPICS BAN:04)

*(Environmental and contamination chemistry)*

In a study of residues of imidacloprid, a neonicotinoid pesticide, half of the fragrant rice samples were found to contain the contaminant in levels exceeding the maximum residue level (MRL), while the levels were below the MRL in other samples, including non-fragrant rice and wheat flour. In cooked rice, no imidacloprid was detected. (IPICS BAN:04)

*(Environmental and contamination chemistry)*

In a study of DDT and metabolites (DDTs) in fish and prawn, the compositional distribution of DDTs indicated both recent and past use of DDT in the region: However, in all samples the levels were within the permissible maximum residue level for human consumption recommended by FAO-WHO. (IPICS BAN:04)

*(Environmental and contamination chemistry)*

In a study of organochlorine compounds and heavy metals in fish, cadmium was detected in one of the fish species (*Metapenaeus monoceros*), at a level exceeding the FAO-WHO maximum residue levels. (IPICS BAN:04)

*(Environmental and contamination chemistry)*

Two methods were developed for determining "allura red", an azo dye, and erythrosine, respectively, suspected to be used in the adulteration of water melons, enhancing their red color. In market samples from Dhaka, however, no adulteration was detected. (IPICS BAN:04)

*(Environmental and contamination chemistry)*

The Bangladesh sweet "laddu" was investigated for adulteration with "yellow 5" (trisodium 1-(4-sulfonatophenyl)-4-(4-sulfonatophenylazo)-5-pyrazolone-3-carboxylate) and "yellow 6" (disodium 6-hydroxy-5-(4-sulfophenyl)azo-2-naphthalenesulfonate), potentially harmful for health. Out of 13 samples, 5 contained yellow 5 and 4 contained yellow 6, while the color agents could not be detected in 4 samples. (IPICS BAN:04)

*(Environmental and contamination chemistry)*

Thirteen local herbal formulations were evaluated and heavy metal contaminants determined (Cu, Cd, Cr, Mn, Pb and Zn). Lead content in eleven of the samples exceeded the permissible limit according to WHO and US FDA. (IPICS BAN:05)

**Burkina Faso**

*(Natural products chemistry)*

In studies of extracts of several plant species containing secondary metabolites of possible biostericidal value, it was found that the aqueous extract of *Eucalyptus camaldulensis* gave better yields in experimental field cultivation of tomatoes. (IPICS BUF:01)

*(Water chemistry)*

Two natural natural laterites were found to remove 5 mg/L of arsenic (V) to 99% in batch experiments with contaminated water. (IPICS BUF:02)
Organoclay materials, synthesized by treatment with surfactants, showed promising ability of removing bisphenol A from aqueous solution.

Chile

Two unusual caprolactam alkaloids, 3-(dimethylamino)hexahydro-2H-azepin-2-one and 3-(methylamino)-hexahydro-2H-azepin-2-one, were isolated from the aerial parts of *Astragalus cryptanthus* Wedd.; their structures were unambiguously determined based on data from extensive 1D and 2D NMR, GC-MS and FT-IR spectroscopic analyses. This is the first report of this alkaloid type in the genus *Astragalus*.

Ethiopia

A record-breaking power conversion efficiency of 9% for a conducting polymer solar cell device was achieved with a ternary system single-junction polymer solar cell, for both conventional and inverted devices.

Tanzania

Recent use of DDT, diazinon and chlorpyrifos in the region was indicated in a study of pesticide residues in the Eastern Lake Tanganyika basin in Tanzania.

Uganda

Observed facial dysplasia in chimpanzees in the Sebitoli area of Kibali National Park may be the result of prenatal exposure to pesticides acting as thyroid hormone disruptors, and used excessively in maize crops in the area.
5.2.2 RBM Logical Framework Follow-Up and Analysis of Key Results

To monitor the outcomes required to fulfill ISP’s objectives, a results based management (RBM) logical framework was established in 2012, with the ISP Strategic Plan 2013-2017, and further refined in 2013. The current version is given in the ISP Annual Report 2013.

In the Annual Report 2015, the first comprehensive presentation of the RMB-indicators was given, with some explanation of the rationale and reasoning behind the selection, and it is here completed with data up to 2017 (Tables 6-10). Sida has selected a number of ISP’s performance indicators for their specific follow-up of ISP operation and results. These are particularly indicated below.

Specific objective 1: Better planning of and improved conditions for carrying out scientific research and postgraduate training

Table 6. "Planning” indicators “a-f” to Specific objective 1. The average values 2008-2013 are given (with the exception given with Note 2 under the *), and the values for 2014, 2015, 2016, and 2017. Sida selected indicators are denoted in bold, with the Sida code in brackets. Where indicators given as percentages (a,b,d) the absolute values are given in brackets; in the case of indicator d as (expenditures/[balances brought forward + allocations]), from 2013 using figures presented in the annual reports.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average 2008-2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of groups and networks supported each year.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Number of applications received in relation to invitations.</td>
<td>93% (138/149)</td>
<td>100% (27/27)</td>
<td>94% (17/18)</td>
<td>100% (20/20)</td>
<td>91% (20/22)</td>
</tr>
<tr>
<td>b) Number of applications granted in relation to submissions. (5.2)</td>
<td>98% (135/138)</td>
<td>89% (24/27)</td>
<td>100% (17/17)</td>
<td>100% (20/20)</td>
<td>95% (19/20)</td>
</tr>
<tr>
<td>c) ISP scientific reference group rating of applications. (5.1)</td>
<td>54%</td>
<td>59%</td>
<td>60%</td>
<td>55%</td>
<td>60%</td>
</tr>
<tr>
<td>d) Expenditures (KSEK) in relation to final yearly budgets (including balances brought forward). *</td>
<td>85% (113,062/132,415)</td>
<td>89% (26,191/29,476)</td>
<td>85% (26,850/31,623)</td>
<td>85% (24,657/28,735)</td>
<td>87% (26,684/30,800)</td>
</tr>
<tr>
<td>e) Yearly amount (and %) of research funding granted from other sources than ISP (MSEK). (5) (In brackets, percentage when also institutional co-funding is included)</td>
<td>11,5 34%</td>
<td>18 38%</td>
<td>16,9 35% (67%)</td>
<td>19,2 40% (69%)</td>
<td>44,2 59% (74%)</td>
</tr>
<tr>
<td>f) Number of activities phased out of support because sustainability has been achieved.</td>
<td></td>
<td>0</td>
<td>1*</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

* Note 1: The average 2008-2013 has been corrected using data from the Annual Reports 2013, 2014 and 2015.
Note 2: Expenditures includes transfers for local use, which, however, may not necessarily have been fully used locally the same year. For the period 2008-2013 the indicated amounts are the totals over the period.
Table 7. "Conditions" indicators "g-i" to specific objective 1. The average values 2008-2013 are given, and the values for 2014, 2015, 2016, and 2017. Percent values are followed by the numbers of females (F) in relation to the total in each category. Sida selected indicators are in bold, with the Sida code in brackets.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average 2008-13</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>g) Gender proportion of staff</td>
<td>ISP total</td>
<td>ISP total</td>
<td>ISP total</td>
<td>ISP total</td>
<td>ISP total</td>
</tr>
<tr>
<td></td>
<td>18% F staff</td>
<td>22% F staff</td>
<td>18% F staff</td>
<td>22% F staff</td>
<td>23% F staff</td>
</tr>
<tr>
<td></td>
<td>(582/3173)</td>
<td>(139/637)</td>
<td>(157/852)</td>
<td>(175/810)</td>
<td>(211/896)</td>
</tr>
<tr>
<td>IPICS</td>
<td>28% (352/1267)</td>
<td>37% (72/194)</td>
<td>25% (93/376)</td>
<td>27% (88/321)</td>
<td>30% (104/347)</td>
</tr>
<tr>
<td>IPMS</td>
<td>12% (110/916)</td>
<td>15% (32/212)</td>
<td>14% (32/226)</td>
<td>20% (52/257)</td>
<td>21% (68/326)</td>
</tr>
<tr>
<td>IPPS</td>
<td>12% (120/990)</td>
<td>14% (35/231)</td>
<td>13% (32/250)</td>
<td>15% (32/181)</td>
<td>18% (39/223)</td>
</tr>
</tbody>
</table>

h1) Gender proportion of all students.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>All students: ISP total</th>
<th>All students: ISP total</th>
<th>All students: ISP total</th>
<th>All students: ISP total</th>
<th>All students: ISP total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23% F PhD</td>
<td>23% F PhD</td>
<td>20% F PhD</td>
<td>26% F PhD</td>
<td>28% F PhD</td>
</tr>
<tr>
<td></td>
<td>(255/1107)</td>
<td>(63/277)</td>
<td>(71/347)</td>
<td>(111/432)</td>
<td>(123/442)</td>
</tr>
<tr>
<td></td>
<td>27% F MSc</td>
<td>32% F MSc</td>
<td>29% F MSc</td>
<td>31% F MSc</td>
<td>33% F MSc</td>
</tr>
<tr>
<td></td>
<td>(515/1934)</td>
<td>(173/550)</td>
<td>(184/635)</td>
<td>(184/599)</td>
<td>(207/631)</td>
</tr>
<tr>
<td>IPICS</td>
<td>34% F PhD</td>
<td>37% F PhD</td>
<td>30% F PhD</td>
<td>36% F PhD</td>
<td>36% F PhD</td>
</tr>
<tr>
<td></td>
<td>(148/438)</td>
<td>(36/98)</td>
<td>(36/122)</td>
<td>(59/163)</td>
<td>(59/163)</td>
</tr>
<tr>
<td></td>
<td>36% F MSc</td>
<td>45% F Msc</td>
<td>38% F Msc</td>
<td>42% F Msc</td>
<td>44% F Msc</td>
</tr>
<tr>
<td></td>
<td>(316/887)</td>
<td>(98/219)</td>
<td>(101/266)</td>
<td>(108/258)</td>
<td>(81/185)</td>
</tr>
<tr>
<td>IPMS</td>
<td>16% F PhD</td>
<td>14% F PhD</td>
<td>15% F PhD</td>
<td>13% F PhD</td>
<td>23% F PhD</td>
</tr>
<tr>
<td></td>
<td>(52/328)</td>
<td>(13/93)</td>
<td>(16/105)</td>
<td>(15/113)</td>
<td>(29/124)</td>
</tr>
<tr>
<td></td>
<td>19% F MSc</td>
<td>19% F MSc</td>
<td>23% F Msc</td>
<td>24% F MSc</td>
<td>27% F MSc</td>
</tr>
<tr>
<td></td>
<td>(51/273)</td>
<td>(14/73)</td>
<td>(21/90)</td>
<td>(12/49)</td>
<td>(40/146)</td>
</tr>
<tr>
<td>IPPS</td>
<td>16% F PhD</td>
<td>16% F PhD</td>
<td>16% F PhD</td>
<td>23% F PhD</td>
<td>23% F PhD</td>
</tr>
<tr>
<td></td>
<td>(55/341)</td>
<td>(14/86)</td>
<td>(19/120)</td>
<td>(34/146)</td>
<td>(35/155)</td>
</tr>
<tr>
<td></td>
<td>19% F MSc</td>
<td>24% F Msc</td>
<td>22% F Msc</td>
<td>22% F MSc</td>
<td>29% F Msc</td>
</tr>
<tr>
<td></td>
<td>(148/774)</td>
<td>(61/258)</td>
<td>(62/279)</td>
<td>(64/292)</td>
<td>(86/300)</td>
</tr>
</tbody>
</table>

7 Source: Condensed indicators (ISP work file)
8 The gender distribution of both reported and graduated postgraduate students are based on condensed indicators for each year (based on data from annual activity reports). Graduated and reported PhD students have been quality assured in detail, meaning that any duplicates and other inconsistencies have been eliminated. The number of PhD students and the gender distribution might therefore differ from numbers stated in the annual reports from these years. Numbers have been harmonized with indicator “q” and “I2” (where data is available). Data for PhD students based on list from indicator “q” and “I”, numbers can differ from numbers in annual reports.
## Gender proportion of graduates

<table>
<thead>
<tr>
<th>Indicator (Table 7, continued)</th>
<th>Average 2008-13</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates: ISP total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17% F PhD (28/161)</td>
<td>22% F PhD (8/36)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24% F MSc (146/619)</td>
<td>28% F MSc (41/148)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPICS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28% F PhD (19/67)</td>
<td>33% F PhD (6/18)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31% F MSc (80/261)</td>
<td>38% F MSc (29/76)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12% F PhD (6/32)</td>
<td>15% F PhD (2/13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21% F MSc (30/140)</td>
<td>5% F MSc (1/21)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7% F PhD (3/42)</td>
<td>0% F PhD (0/5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17% F MSc (36/218)</td>
<td>22% F MSc (11/51)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISP Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81% (394/488)</td>
<td>86% (185/215)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81% (98/121)</td>
<td>96% (44/46)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81% (296/367)</td>
<td>83% (141/169)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPICS Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77% (142/185)</td>
<td>90% (54/60)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>83% (53/64)</td>
<td>97% (29/30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81% (89/121)</td>
<td>83% (25/30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPMS Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82% (144/175)</td>
<td>90% (76/84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>88% (28/32)</td>
<td>100% (9/9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81% (116/143)</td>
<td>89% (67/75)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPPS Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>84% (108/128)</td>
<td>79% (55/70)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68% (17/25)</td>
<td>86% (6/7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>88% (91/103)</td>
<td>78% (49/63)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Note

9 The gender distribution of both reported and graduated postgraduate students are based on condensed indicators for each year (based on data from activity reports, used as base for the annual reports). Graduated and reported PhD students have been quality assured in detail, meaning that any duplicates and other inconsistencies in the reporting of graduates and students have been removed. The number of PhD students and the gender distribution might therefore differ from numbers stated in the annual reports from these years. Numbers have been harmonized with indicator q and i (where data is available). Data for PhD students based on list from indicator j and i, numbers can differ from numbers in annual reports.

10 Data for the past agreement period is available only for 2011-2013.
Table 8. "Conditions" indicators "j-m" to specific objective 1. The average values 2008-2013 are given, and the values for 2014, 2015, and 2016.11

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average 2008-13</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>j) Duration of study of graduating PhDs, both total, and sandwich (SWH)</td>
<td>4.9 Years</td>
<td>4.8 Years</td>
<td>5.0 Years</td>
<td>4.9 Years</td>
<td>4.8 Years</td>
</tr>
<tr>
<td>and local (LOC) graduates.12</td>
<td>SWH: 4.9</td>
<td>SWH: 4.8</td>
<td>SWH: 5.5</td>
<td>SWH: 5.0</td>
<td>SWH: 5.0</td>
</tr>
<tr>
<td></td>
<td>LOC: 4.9</td>
<td>LOC: 4.7</td>
<td>LOC: 4.7</td>
<td>LOC: 4.9</td>
<td>LOC: 4.8</td>
</tr>
<tr>
<td>l) Share of groups and networks stating to be fully or to a large extent satisfied with the access to equipment needed to carry out research.</td>
<td>-</td>
<td>-</td>
<td>57% (n=47)</td>
<td>59% (n=56)</td>
<td>50% (n=54)</td>
</tr>
<tr>
<td>m) Measures recommended by ISP to reduce negative environmental impact that have been implemented.</td>
<td>55%</td>
<td>67%</td>
<td>76%</td>
<td>68%</td>
<td>72%</td>
</tr>
</tbody>
</table>

Specific objective 1: Analysis of key results

Most results represented by the RBM performance indicators are fairly stable over the years, for reasons discussed in the Annual Report 2015. A few, however, show a development between years, that might make up emerging trends. Only such are commented here.

The yearly amount of research funding granted from other sources than ISP (indicator e) has made up in average 34% of total research funding, including ISP’s contribution, during 2008-2013, and has increased slightly 2014-2016. In 2017, however, is almost 60%, because a few partners managed to secure notably large grants from other sources. The largest amounts were awarded IPPS BAN:02, receiving about 26 MSEK from Bangladesh government bodies, and the IPMS EAUMP nodes in Tanzania and Uganda that were awarded Sida bilateral funding of 1.7 and 6.5 MSEK, respectively. Two chemistry groups secured external grants of 0.6-0.7 MSEK each in the reporting year. When including also institutional co-funding, the total value of resources from other sources than ISP was 67-74% of total resources in 2015-2017. It should however, be kept in mind that considered separately, some groups and networks are much more dependent on funding from ISP (80-90%), serving as their main funding source, while for other groups ISP funding constitutes only a small percentage of their total resources. In the latter case, ISP reviews whether further funding is needed or if phase-out to be considered.

The gender proportion of the staff (indicator g) of ISP's partners essentially remains the same as in the previous Sida agreement period with ISP, 2008-2013. Considered separately, however, it can be concluded that in particular a number of chemistry partners show gender parity.

The gender proportion of all students (indicator h1) shows more of development on the aggregated level. In all three programs, there has been a modest increase in the share of female MSc and PhD students among those reported to ISP, although less accentuated in chemistry students, already with around 40% females since the previous period. The share of females among mathematics and physics PhD students is in 2017 more than 20%, while closer to 15% earlier years. The corresponding female shares of MSc students have increased from about 20% to close to 30% in the same period.

The gender proportion of graduates (indicator h2), however, shows a much stronger increase in female participation, in particular among PhD graduates reported by chemistry partners, from an average of 17% in the previous period to 38% in 2017, and mathematics partners, from an

11 In 2015, indicator “k” (Number of external scientific collaborators per group, and share international (I), regional (R), national (N) and local (L)) was abandoned. Furthermore, indicator “l” was re-phrased and based on an activity reporting question introduced in 2015 (hence no value for 2014).
12 The completion time is calculated as graduation year minus starting year, plus 0.5 years to compensate for potential bias in what time of the year the graduate started and graduated.
average of 12% in the previous period to 40% in 2017. A similar increase can be seen among mathematics MSc graduates. Similarly, in average 7% of physics graduates in the previous period were female, while 55% were in 2016 and 22% in 2017. Much of these increases in the mathematics and physics programs are due to the start of research support in Myanmar, where females are most predominant in academia also in these subjects.

Regarding the gender-focused indicators, although ISP since 2015 has initiated new efforts to promote gender balance and equality – in addition to earlier years of efforts (although less systematic) to the same purpose – it is still to early to see effects of the latest few years of strategic activities that have been launched. However, these activities (e.g. extra funds made available for gender equality promoting activities) has been very well received and several successful activities has been carried out (see Section 3.2.2 for examples).

The proportion of PhD students continuing or graduating each year (indicator i) shows a steady increase since the previous period, and during 2016 and 2017 a seemingly a higher proportion of females, 100% or close to that, continue and graduate.

The duration of study of graduating PhDs (indicator j) remains stable at about 5 years, which compares well with Swedish research students within the same fields of science. Further, when comparing sandwich students with students doing their PhD full time locally, there is only a marginally longer average time for sandwich students to complete their degrees.

The measures recommended by ISP to reduce negative environmental impact that have been implemented (indicator m) shows a clear increase over the years, which might be an effect of ISP’s efforts to increase the awareness about these issues.

**Specific objective 2: Increased production of high quality research**

Table 9. "Production" indicators "n-r" to specific objective 2, where quality measures are included in indicators "n" and "o", and "r" is exclusively a quality indicator

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average 2008-13</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>n) Number of publications, and proportion in indexed journals (Web of Science). (8.1)</td>
<td>153 (45%)&lt;sup&gt;13&lt;/sup&gt;</td>
<td>231 (44%)</td>
<td>257 (43%)</td>
<td>295 (39%)&lt;sup&gt;14&lt;/sup&gt;</td>
<td>310 (46%)&lt;sup&gt;14&lt;/sup&gt;</td>
</tr>
<tr>
<td>o) Total number of yearly conference contributions, and proportion international.</td>
<td>229 (39%)</td>
<td>229 (51%)</td>
<td>349 (36%)</td>
<td>323 (38%)</td>
<td>439 (30%)</td>
</tr>
<tr>
<td>p) Number of MSc graduations per year. (7.2)</td>
<td>103 (24% F)</td>
<td>148 (28% F)</td>
<td>143 (25% F)</td>
<td>188 (28% F)</td>
<td>258 (39% F)</td>
</tr>
<tr>
<td>q) Number of PhD graduations per year. (7.1)</td>
<td>27 (17% F)</td>
<td>36 (22% F)</td>
<td>53 (15% F)</td>
<td>80 (33% F)</td>
<td>90 (38% F)</td>
</tr>
<tr>
<td>r1) Number and share of PhD graduates having published results before thesis defense&lt;sup&gt;15&lt;/sup&gt;</td>
<td>44% (71/161)</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>r2) Number and share of PhD graduates having published results three years after thesis defense&lt;sup&gt;16&lt;/sup&gt;</td>
<td>55% (89/161)</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

* To be added at the end of the granting period.

---

<sup>13</sup> Data for the past agreement period is available only for 2010-2013.

<sup>14</sup> Note that an additional quality measure is introduced from 2016 (see Appendix 2), extending the range of "quality journals". Considering this extended range of journals the indicator in 2016 increases to 50%, and in 2017 to 54%.

<sup>15</sup> The indicator is based on Web of Science search.

<sup>16</sup> The indicator is based on Web of Science search of the graduating year plus two years after, e.g. for 2008 years 2008, 2009 and 2010 are included. The accumulated measure builds on number of graduates having published after thesis defense year by year.
Specific objective 2: Analysis of key results

The number of publications, and proportion in indexed journals (indicator n) has developed in terms of numbers, and doubled since the previous period, while the share of publication in Web of Science-indexed journals has remained the same. There is a risk that “predatory publishers” are “facilitating” publication of results, in the absence of strict peer-review processes. The share of “quality publications” is not declining, and, therefore, also shows an increase in numbers.

The number of yearly conference contributions (indicator o) has also increased, while the proportion at international conferences remains more or less the same (or maybe even shows a small decrease). Still, in numbers, also the contributions to international conferences have increased. It might be considered, however, that this kind of dissemination can be equally important on the regional and local level as on the international level.

The number of MSc graduations per year (indicator p) and the number of PhD graduations per year (indicator q) have almost tripled since the previous period, and the share of females of graduates almost doubled. The increasing numbers may be due to an increasing capacity for local PhD training, with an increasing number of PhD graduates among partners, but there may be other explanations as well, such as starting support in environments where local PhD programs are already at hand, and where a higher proportion of females is already settled.

Specific objective 3: Increased use of research results and (skills of) graduates

Table 10. Research and graduates “use” indicators “s-v” to specific objective 3

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average 2008-13*</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>s) Number of outreaching activities performed (Sida indicator 9.1) and share of groups and networks reporting outreach activities (see Section 6.2).</td>
<td>Average no/year: 19</td>
<td>Total: 43</td>
<td>Total: 28</td>
<td>Total: 34</td>
<td>Total: 39</td>
</tr>
<tr>
<td></td>
<td>24% (70/292) of RG and NW reporting outreach</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20% (12/60) of RG and NW reporting outreach</td>
<td>22% (13/59) of RG and NW reporting outreach</td>
<td>32% (19/59) of RG and NW reporting outreach</td>
<td>28% (17/60) of RG and NW reporting outreach</td>
<td></td>
</tr>
<tr>
<td>t) Number of and nature of honors (awards, promotions, etc) (Sida indicator 9.3) and share of groups and networks reporting honors (see Section 6.3.1).</td>
<td>Average no/year: 24 (20% F)</td>
<td>Total no: 50 (26% F)</td>
<td>Total no: 78 (21% F)</td>
<td>Total no: 97 (19% F)</td>
<td>Total no: 74 (27% F)</td>
</tr>
<tr>
<td></td>
<td>23% (68/292) of RG and NW reporting honors</td>
<td>18% (11/60) of RG and NW reporting honors</td>
<td>42% (25/59) of RG and NW reporting honors</td>
<td>42% (25/59) of RG and NW Reporting honors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>35% (101/292) of RG and NW reporting use</td>
<td>20% (12/60) of RG and NW reporting use</td>
<td>51% (30/59) of RG and NW reporting use</td>
<td>44% (26/59) of RG and NW Reporting use</td>
<td></td>
</tr>
<tr>
<td>u) Number of instances when research results or skills is used by society (Sida indicator 9.2), and share of partners reporting such use17 (see Section 6.1).</td>
<td>Average no/year: 14</td>
<td>Total no of use: 19</td>
<td>Total no of use: 66</td>
<td>Total no of use: 52</td>
<td>Total no of use: 30</td>
</tr>
<tr>
<td></td>
<td>35% (101/292) of RG and NW reporting use</td>
<td>20% (12/60) of RG and NW reporting use</td>
<td>51% (30/59) of RG and NW reporting use</td>
<td>44% (26/59) of RG and NW Reporting use</td>
<td></td>
</tr>
<tr>
<td>v) Share of graduates remaining in their home countries or regions.</td>
<td>92% (142/154) **</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td></td>
</tr>
</tbody>
</table>

* The number of research groups and networks referred to in indicators “s”, “t”, and “u” is the accumulated number for the period, that is, the sum of the number of partners supported each year.
** To be added at the end of the granting period.

17 Data requirements on applications or use of research results were first introduced in the activity reporting templates for 2010.
**Specific objective 3: Analysis of key results**

The performance indicators to Specific objective 3 are intended to meet the requirement for systematically collecting "anecdotal evidence" of ISP impact, as recommended in the 2011 evaluation of ISP. However, as is the case with several other of the indicators, there are difficulties in attribution to ISP support. Furthermore, the Specific objective 3-indicators s, t and u are essentially qualitative in nature, and the usefulness of quantitative data might be questioned. Nevertheless, the actual activities behind the numbers are provided in the report (Section 6), and Sida has selected particularly these indicators among those to be followed-up by them. Like all performance indicators in the ISP RBM logical framework, ISP's intention is to more closely evaluate their relevance after their implementation in the current agreement period with Sida.

Regarding the number of outreaching activities performed (indicator s), there might be a tendency that an increasing share of partners are reporting outreaching activities each year, from 2014. It would be desirable that all partners find time to devote to outreach to society, and such activities can be carried out using ISP's contribution.

Regarding the number of and nature of honors (indicator t), many of the achievements are particularly difficult to attribute to ISP, because they reflect the individual abilities. To a degree, however, the development of these abilities might have been facilitated by the attachment to an ISP-supported research group or scientific network. Either way, the promotion to professors in supported groups, appointments to government or local committees and working groups, as well as recognition in the shape of awards, are important signs of increased capacity in supported groups and therefore essential to bring to attention.

Regarding the number of instances when research results or skills is used by society (indicator u), the quantitative results are quite variable, and poorly reflect the qualitative nature of the reported ‘use’ (see Sections 3.3.1 and 6.1.1).
5.2.3 Expenditures by Supported Activities

**Distribution of Expenditures**

In 2017, total expenditures by research groups and networks were 26.7 million SEK. Research groups (Table 11) accounted for 62% and scientific networks (Table 12) for 38% of the total expenditures, together using 87% of the financial resources available (including balances brought forward from 2016).

Table 11. RG allocations, balances, and expenditures 2017, kSEK. (BBF = balance brought forward from 2016; BCF = balance carried forward to 2018, following ISP Board decision)

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>ISP Code</th>
<th>Start</th>
<th>BBF</th>
<th>Alloc.</th>
<th>Loc. use</th>
<th>ISP pay</th>
<th>Total Exp.</th>
<th>BCF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Burkina F.</td>
<td>IPICS BUF:01</td>
<td>2008</td>
<td>221</td>
<td>231</td>
<td>296</td>
<td>12</td>
<td>308</td>
<td>144</td>
</tr>
<tr>
<td>Africa</td>
<td>Burkina F.</td>
<td>IPICS BUF:02</td>
<td>2008</td>
<td>0</td>
<td>474</td>
<td>275</td>
<td>168</td>
<td>443</td>
<td>32</td>
</tr>
<tr>
<td>Africa</td>
<td>Ethiopia</td>
<td>IPICS ETH:01</td>
<td>2002</td>
<td>176</td>
<td>650</td>
<td>0</td>
<td>843</td>
<td>843</td>
<td>-17</td>
</tr>
<tr>
<td>Africa</td>
<td>Ethiopia</td>
<td>IPICS ETH:02</td>
<td>2013</td>
<td>590</td>
<td>271</td>
<td>0</td>
<td>46</td>
<td>46</td>
<td>815</td>
</tr>
<tr>
<td>Africa</td>
<td>Ethiopia</td>
<td>IPICS ETH:04</td>
<td>2013</td>
<td>222</td>
<td>579</td>
<td>379</td>
<td>210</td>
<td>589</td>
<td>149</td>
</tr>
<tr>
<td>Africa</td>
<td>Kenya</td>
<td>IPICS KEN:01</td>
<td>2011</td>
<td>598</td>
<td>579</td>
<td>0</td>
<td>695</td>
<td>695</td>
<td>482</td>
</tr>
<tr>
<td>Africa</td>
<td>Kenya</td>
<td>IPICS KEN:02</td>
<td>2011</td>
<td>-10</td>
<td>579</td>
<td>562</td>
<td>7</td>
<td>569</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>Mali</td>
<td>IPICS MAL:01</td>
<td>2002</td>
<td>0</td>
<td>200</td>
<td>0</td>
<td>145</td>
<td>145</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>Rwanda</td>
<td>IPICS RWA:01</td>
<td>2014</td>
<td>143</td>
<td>340</td>
<td>112</td>
<td>329</td>
<td>441</td>
<td>42</td>
</tr>
<tr>
<td>Africa</td>
<td>Uganda</td>
<td>IPICS UGA:01</td>
<td>2015</td>
<td>-3</td>
<td>371</td>
<td>112</td>
<td>267</td>
<td>379</td>
<td>-11</td>
</tr>
<tr>
<td>Africa</td>
<td>Uganda</td>
<td>IPICS UGA:02</td>
<td>2016</td>
<td>-3</td>
<td>371</td>
<td>112</td>
<td>267</td>
<td>379</td>
<td>-11</td>
</tr>
<tr>
<td>Africa</td>
<td>Zambia</td>
<td>IPICS ZAM:01</td>
<td>2011</td>
<td>52</td>
<td>318</td>
<td>0</td>
<td>297</td>
<td>297</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>Zimbabwe</td>
<td>IPICS ZIM:01</td>
<td>2006</td>
<td>17</td>
<td>368</td>
<td>215</td>
<td>224</td>
<td>439</td>
<td>-54</td>
</tr>
<tr>
<td>Africa</td>
<td>Zimbabwe</td>
<td>IPICS ZIM:02</td>
<td>1999</td>
<td>0</td>
<td>329</td>
<td>86</td>
<td>247</td>
<td>333</td>
<td>-5</td>
</tr>
<tr>
<td>Africa</td>
<td>IPICS RG, Total</td>
<td></td>
<td>2005</td>
<td>0</td>
<td>650</td>
<td>139</td>
<td>203</td>
<td>342</td>
<td>308</td>
</tr>
<tr>
<td>Africa</td>
<td>IPMS RG, Total</td>
<td></td>
<td>2005</td>
<td>0</td>
<td>650</td>
<td>139</td>
<td>203</td>
<td>342</td>
<td>308</td>
</tr>
<tr>
<td>Africa</td>
<td>Burkina F.</td>
<td>IPPS BUF:01</td>
<td>2013</td>
<td>-25</td>
<td>420</td>
<td>246</td>
<td>45</td>
<td>291</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>Ethiopia</td>
<td>IPPS ETH:01</td>
<td>1990</td>
<td>6</td>
<td>400</td>
<td>51</td>
<td>249</td>
<td>300</td>
<td>55</td>
</tr>
<tr>
<td>Africa</td>
<td>Ethiopia</td>
<td>IPPS ETH:02</td>
<td>2005</td>
<td>221</td>
<td>300</td>
<td>91</td>
<td>237</td>
<td>328</td>
<td>193</td>
</tr>
<tr>
<td>Africa</td>
<td>Kenya</td>
<td>IPPS KEN:01</td>
<td>1991</td>
<td>-14</td>
<td>650</td>
<td>601</td>
<td>35</td>
<td>636</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>Kenya</td>
<td>IPPS KEN:02</td>
<td>1998</td>
<td>238</td>
<td>450</td>
<td>635</td>
<td>36</td>
<td>671</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>Kenya</td>
<td>IPPS KEN:03</td>
<td>1998</td>
<td>0</td>
<td>300</td>
<td>0</td>
<td>241</td>
<td>241</td>
<td>59</td>
</tr>
<tr>
<td>Africa</td>
<td>Kenya</td>
<td>IPPS KEN:04</td>
<td>2005</td>
<td>60</td>
<td>500</td>
<td>203</td>
<td>182</td>
<td>385</td>
<td>136</td>
</tr>
<tr>
<td>Africa</td>
<td>Kenya</td>
<td>IPPS KEN:05</td>
<td>2010</td>
<td>0</td>
<td>380</td>
<td>246</td>
<td>127</td>
<td>373</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>Mali</td>
<td>IPICS MAL:01</td>
<td>2011</td>
<td>11</td>
<td>380</td>
<td>236</td>
<td>81</td>
<td>256</td>
<td>-5</td>
</tr>
<tr>
<td>Africa</td>
<td>Rwanda</td>
<td>IPICS RWA:01</td>
<td>2014</td>
<td>-3</td>
<td>430</td>
<td>99</td>
<td>341</td>
<td>440</td>
<td>-14</td>
</tr>
<tr>
<td>Africa</td>
<td>Uganda</td>
<td>IPPS UGA:01</td>
<td>1999</td>
<td>-14</td>
<td>210</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>196</td>
</tr>
<tr>
<td>Africa</td>
<td>Uganda</td>
<td>IPPS UGA:02</td>
<td>2013</td>
<td>0</td>
<td>400</td>
<td>161</td>
<td>239</td>
<td>400</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>Zambia</td>
<td>IPPS ZAM:01</td>
<td>1988</td>
<td>0</td>
<td>350</td>
<td>0</td>
<td>350</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>Zimbabwe</td>
<td>IPPS ZIM:01</td>
<td>2013</td>
<td>-20</td>
<td>350</td>
<td>294</td>
<td>36</td>
<td>330</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPICS RG, Total</td>
<td></td>
<td>487</td>
<td>5</td>
<td>620</td>
<td>3164</td>
<td>2069</td>
<td>5233</td>
<td>625</td>
</tr>
<tr>
<td>Asia</td>
<td>Bangladesh</td>
<td>IPICS BAN:04</td>
<td>2003</td>
<td>55</td>
<td>421</td>
<td>476</td>
<td>0</td>
<td>476</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>Bangladesh</td>
<td>IPICS BAN:05</td>
<td>2013</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>Cambodia</td>
<td>IPICS CAB:01</td>
<td>2010</td>
<td>-255</td>
<td>830</td>
<td>363</td>
<td>997</td>
<td>1360</td>
<td>-260</td>
</tr>
<tr>
<td>Asia</td>
<td>Laos</td>
<td>IPICS LAO:01</td>
<td>2005</td>
<td>-24</td>
<td>251</td>
<td>119</td>
<td>223</td>
<td>342</td>
<td>-115</td>
</tr>
<tr>
<td>Asia</td>
<td>IPICS RG, Total</td>
<td></td>
<td>-224</td>
<td>1</td>
<td>602</td>
<td>1058</td>
<td>1220</td>
<td>2278</td>
<td>-375</td>
</tr>
<tr>
<td>Asia</td>
<td>Bangladesh</td>
<td>IPICS BAN:02</td>
<td>1980</td>
<td>0</td>
<td>400</td>
<td>161</td>
<td>359</td>
<td>520</td>
<td>-139</td>
</tr>
<tr>
<td>Asia</td>
<td>Bangladesh</td>
<td>IPICS BAN:04</td>
<td>2011</td>
<td>-9</td>
<td>530</td>
<td>521</td>
<td>0</td>
<td>521</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>Bangladesh</td>
<td>IPICS BAN:05</td>
<td>2014</td>
<td>96</td>
<td>250</td>
<td>207</td>
<td>119</td>
<td>326</td>
<td>20</td>
</tr>
<tr>
<td>Asia</td>
<td>Cambodia</td>
<td>IPPS CAM:01</td>
<td>2014</td>
<td>400</td>
<td>250</td>
<td>207</td>
<td>119</td>
<td>326</td>
<td>30</td>
</tr>
<tr>
<td>Asia</td>
<td>Laos</td>
<td>IPICS LAO:01</td>
<td>2005</td>
<td>0</td>
<td>225</td>
<td>225</td>
<td>0</td>
<td>225</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>Myanmar</td>
<td>IPPS MYA:01</td>
<td>2016</td>
<td>10</td>
<td>275</td>
<td>98</td>
<td>138</td>
<td>236</td>
<td>50</td>
</tr>
<tr>
<td>Asia</td>
<td>IPICS RG, Total</td>
<td></td>
<td>97</td>
<td>2</td>
<td>680</td>
<td>1626</td>
<td>960</td>
<td>2586</td>
<td>173</td>
</tr>
</tbody>
</table>

Grand Tot., RG

**Total**: 2365 16 588 8 428 8 169 16 597 2 308
Table 12. NW allocations, balances, and expenditures 2017, kSEK. Country refers to that from which the network is coordinated. (BBF = balance brought forward from 2016; BCF = balance carried forward to 2018, following after ISP Board decision)

<table>
<thead>
<tr>
<th>Reg.</th>
<th>ISP Code</th>
<th>Country</th>
<th>Start</th>
<th>BBF</th>
<th>Alloc.</th>
<th>Loc use</th>
<th>ISP pay</th>
<th>Tot. Exp.</th>
<th>BCF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>IPICS ANCAP</td>
<td>Tanzania</td>
<td>2001</td>
<td>-183</td>
<td>263</td>
<td>80</td>
<td>0</td>
<td>80</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPICS ANEC</td>
<td>Burkina Faso</td>
<td>2013</td>
<td>0</td>
<td>312</td>
<td>202</td>
<td>75</td>
<td>277</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPICS NABSA</td>
<td>Botswana</td>
<td>1995</td>
<td>29</td>
<td>526</td>
<td>300</td>
<td>54</td>
<td>354</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPICS NAPRECA</td>
<td>Kenya</td>
<td>1988</td>
<td>480</td>
<td>366</td>
<td>245</td>
<td>58</td>
<td>303</td>
<td>543</td>
</tr>
<tr>
<td>Africa</td>
<td>IPICS RABiotech</td>
<td>Burkina Faso</td>
<td>2008</td>
<td>0</td>
<td>412</td>
<td>412</td>
<td>0</td>
<td>412</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPICS SEANAC</td>
<td>Botswana</td>
<td>2005</td>
<td>332</td>
<td>418</td>
<td>500</td>
<td>0</td>
<td>500</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPICS NW, Total</td>
<td></td>
<td></td>
<td>658</td>
<td>2297</td>
<td>1739</td>
<td>187</td>
<td>1926</td>
<td>543</td>
</tr>
<tr>
<td>Africa</td>
<td>IPMS BURK:01</td>
<td>Burkina Faso</td>
<td>2003</td>
<td>0</td>
<td>971</td>
<td>705</td>
<td>205</td>
<td>910</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPMS EAUMP</td>
<td>Uganda</td>
<td>2002</td>
<td>-40</td>
<td>2728</td>
<td>1145</td>
<td>1804</td>
<td>2949</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPMS NW, Total</td>
<td></td>
<td></td>
<td>-40</td>
<td>3699</td>
<td>1850</td>
<td>2009</td>
<td>3859</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPPS AF SIN</td>
<td>Ivory Coast</td>
<td>2011</td>
<td>38</td>
<td>660</td>
<td>23</td>
<td>620</td>
<td>643</td>
<td>55</td>
</tr>
<tr>
<td>Africa</td>
<td>IPPS EAARN</td>
<td>Uganda</td>
<td>2014</td>
<td>0</td>
<td>550</td>
<td>70</td>
<td>507</td>
<td>577</td>
<td>-27</td>
</tr>
<tr>
<td>Africa</td>
<td>IPPS ESARSWG</td>
<td>Zimbabwe</td>
<td>1997</td>
<td>186</td>
<td>320</td>
<td>118</td>
<td>256</td>
<td>374</td>
<td>132</td>
</tr>
<tr>
<td>Africa</td>
<td>IPPS LAM</td>
<td>Senegal</td>
<td>1996</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Africa</td>
<td>IPPS MSSEESA</td>
<td>Zambia</td>
<td>2009</td>
<td>0</td>
<td>310</td>
<td>50</td>
<td>199</td>
<td>249</td>
<td>60</td>
</tr>
<tr>
<td>Africa</td>
<td>IPPS NW, Total</td>
<td></td>
<td></td>
<td>224</td>
<td>1840</td>
<td>261</td>
<td>1582</td>
<td>1843</td>
<td>220</td>
</tr>
<tr>
<td>Asia</td>
<td>IPICS ANFEC</td>
<td>Laos</td>
<td>2013</td>
<td>-21</td>
<td>263</td>
<td>0</td>
<td>240</td>
<td>240</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>IPICS ANRAP</td>
<td>Bangladesh</td>
<td>1994</td>
<td>0</td>
<td>316</td>
<td>316</td>
<td>0</td>
<td>316</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>IPICS CAB-CCS</td>
<td>Cambodia</td>
<td>0</td>
<td>0</td>
<td>73</td>
<td>72</td>
<td>0</td>
<td>72</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>IPICS NITUB</td>
<td>Bangladesh</td>
<td>1995</td>
<td>0</td>
<td>336</td>
<td>336</td>
<td>0</td>
<td>336</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>IPICS NW, Total</td>
<td></td>
<td></td>
<td>-21</td>
<td>915</td>
<td>652</td>
<td>240</td>
<td>892</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>IPMS SEAMaN</td>
<td>Cambodia</td>
<td>2015</td>
<td>25</td>
<td>827</td>
<td>267</td>
<td>504</td>
<td>771</td>
<td>0</td>
</tr>
<tr>
<td>Asia</td>
<td>IPMS NW, Total</td>
<td></td>
<td></td>
<td>25</td>
<td>827</td>
<td>267</td>
<td>504</td>
<td>771</td>
<td>0</td>
</tr>
<tr>
<td>LAm</td>
<td>IPICS LANBIO</td>
<td>Chile</td>
<td>1986</td>
<td>0</td>
<td>313</td>
<td>313</td>
<td>0</td>
<td>313</td>
<td>0</td>
</tr>
<tr>
<td>LAm</td>
<td>IPICS NW, Total</td>
<td></td>
<td></td>
<td>0</td>
<td>313</td>
<td>313</td>
<td>0</td>
<td>313</td>
<td>0</td>
</tr>
<tr>
<td>LAm</td>
<td>IPPS NADMICA18</td>
<td>Guatemala</td>
<td>2012</td>
<td>1,110</td>
<td>0</td>
<td>0</td>
<td>483</td>
<td>483</td>
<td>627</td>
</tr>
<tr>
<td>IPPS NW, Total</td>
<td></td>
<td></td>
<td>1,110</td>
<td>0</td>
<td>0</td>
<td>483</td>
<td>483</td>
<td>627</td>
<td></td>
</tr>
<tr>
<td>LAm</td>
<td>IPPS NW, Total</td>
<td></td>
<td></td>
<td>1,110</td>
<td>0</td>
<td>0</td>
<td>483</td>
<td>483</td>
<td>627</td>
</tr>
<tr>
<td>Grand Tot., NW</td>
<td></td>
<td></td>
<td>1,956</td>
<td>9,891</td>
<td>5,082</td>
<td>5,005</td>
<td>10,087</td>
<td>1,390</td>
<td></td>
</tr>
</tbody>
</table>

Nominally, 13% of the funding available to groups and networks was carried forward to 2018, but only 12% was carried forward to groups’ and networks’ accounts, following a notification procedure and decision by the ISP board.

IPICS partners accounted for 43% of the total expenditures, 73% of that by research groups and 27% by networks; IPMS partners accounted for 19% of the total expenditures, 7% of that by research groups and 93% by networks; and IPPS partners accounted for 38% of the total expenditures, 77% of that by research groups and 33% by networks (Figure 1).

In all, the supported activities in Africa accounted for 73% of the expenditures, those in Asia for 24%, and those in Latin America for 3% (Figure 2). The research groups in Africa accounted for 71%, and those in Asia for 29% of the total research group expenditures (Figure 3; there were no research groups supported in Latin America). The scientific networks in Africa accounted for 76%, those in Asia for 16% and those in Latin America for 8% of the total network expenditures (Figure 4).

---

18 Incorrect BCF figure in AR2016.
Figure 1. Distribution by program of total expenditures (%) of research groups and scientific network.

Figure 2. Distribution by region of the total expenditures (%) of research groups and scientific networks.

Figure 3. Distribution by program and region of research groups’ expenditures (%).

Figure 4. Distribution by program and region of scientific networks’ expenditures (%).
Management of Expenditures

Each group and network has a yearly allocation, decided by the ISP board after an application and assessment procedure involving the programs’ scientific reference groups. In this report, it is distinguished between expenditures carried out locally, after transfer of funds to a local account, and expenditures by payments to third parties carried out by ISP. In both cases, the transactions are formally requested by the accountable group leader or network coordinator, and should follow the budget for the use of funding for the year in question.

Funds transferred for local use may not always be spent directly, and are to be accounted for each year. Whether it is feasible or not to manage funds locally depends on the local financial management system and the administrative competence of the local staff. Payments to third parties by ISP may for example be to companies, from which instruments were purchased, and to sandwich students’ subsistence in their host country, as well as to reimburse costs at the corresponding host institutions. In total, 51% of the expenditures by research groups and networks were managed locally.

The IPICS research groups, and the single IPMS research group, managed totally 41% of expenditures locally, while 51% of expenditures were executed by ISP payments (Figure 5). IPPS research groups managed 61% of their expenditures locally and 39% by ISP payments.

![Figure 5](image5.png)

**Figure 5.** Distribution of expenditures (kSEK) of research groups between local use and payments by ISP.

In networks, those supported by IPICS managed in total 86% of their expenditures locally, and 14% by requesting ISP to carry out payments; those supported by IPMS managed 46% locally, and 54% by requesting ISP to carry out payments; and those supported by IPPS managed 11% locally, and 89% by requesting ISP to carry out payments (Figure 6).

![Figure 6](image6.png)

**Figure 6.** Distribution of expenditures (kSEK) of networks between local use and payments by ISP.
Considering regions, African research groups managed 49% of expenditures locally, and 51% were managed by ISP (Figure 7). African networks managed 50% locally, and 50% were managed by ISP. In Asia, research groups and networks managed 55% of expenditures locally, and 45% were managed by ISP. In Latin America, IPICS-supported LANBIO managed 100% of their ISP funds locally, making up 39% of the network expenditures in that region, while ISP managed all expenditures of IPPS-supported NADMICA, making up 61% of the network expenditures by networks in the region. The latter is explained by the fact that all NADMICA expenditures regarded students being trained in Sweden.

**Figure 7.** Distribution by region of expenditures (kSEK) of research groups and networks between local use and payments by ISP.

**Expenditures in relation to Swedish Focus Countries**

Research groups in Swedish focus countries (see Section 5.1.1) spent 86% of the total research group expenditures, while research groups in those Swedish focus countries that do not yet have a Sida bilateral agreement on research development cooperation spent 60% (Table 13). Research groups in non-focus countries (Laos, Myanmar and Zimbabwe) accounted for 14% of the total research group expenditures. Those in Laos, the physics group in Myanmar, and one research group in Zimbabwe (IPICS ZIM:02) were financed by Stockholm University funding, making up 39% of the expenditures in non-focus countries (Table 14).

**Table 13.** Distribution of research group total expenditures (kSEK and %) in 2017 in Swedish focus countries (FC) with or without Sida bilateral research development programs (Bil.Prg.), and to other countries, for IPICS, IPMS and IPPS

<table>
<thead>
<tr>
<th>Country Category</th>
<th>IPICS</th>
<th></th>
<th>IPMS</th>
<th></th>
<th>IPPS</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FC with Sida Bil.Prg.</td>
<td>2,553</td>
<td>30</td>
<td>342</td>
<td>100</td>
<td>1,468</td>
<td>19</td>
<td>4,363</td>
<td>26</td>
</tr>
<tr>
<td>FC, without Sida Bil.Prg.</td>
<td>4,393</td>
<td>52</td>
<td>0</td>
<td>0</td>
<td>5,560</td>
<td>71</td>
<td>9,953</td>
<td>60</td>
</tr>
<tr>
<td>Other Countries</td>
<td>1,490</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>791</td>
<td>10</td>
<td>2,281</td>
<td>14</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>8,463</td>
<td>100</td>
<td>342</td>
<td>100</td>
<td>7,819</td>
<td>100</td>
<td>16,597</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 14.** Distribution of Research Group total expenditures (kSEK and %) in 2017, in countries other than Swedish focus countries for IPICS, IPMS and IPPS, funded by the Sida or by the SU contribution

<table>
<thead>
<tr>
<th>Country and Funding</th>
<th>IPICS</th>
<th></th>
<th>IPMS</th>
<th></th>
<th>IPPS</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Laos &amp; Myanmar – SU funding</td>
<td>342</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>461</td>
<td>58</td>
<td>803</td>
<td>35</td>
</tr>
<tr>
<td>Zimbabwe – Sida funding</td>
<td>1,148</td>
<td>77</td>
<td>0</td>
<td>0</td>
<td>330</td>
<td>42</td>
<td>1,478</td>
<td>65</td>
</tr>
<tr>
<td>Total &quot;Other Countries&quot;</td>
<td>1,490</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>791</td>
<td>100</td>
<td>2,281</td>
<td>100</td>
</tr>
</tbody>
</table>

The expenditures of chemistry research group in focus countries amounted to 82% of the total chemistry research group expenditures, and 52% was spent by groups in countries not having a Sida bilateral program (Figure 8). The expenditures of mathematics research groups in focus
countries amounted to 100%, all spent by the one group in Ethiopia, having a Sida bilateral program. The expenditures of physics research groups in focus countries amounted to 90% of the total physics research group expenditures, and 71% was spent by groups in countries not having a Sida bilateral program.

Figur 8. Distribution by program of expenditures (kSEK) by research groups in Swedish focus countries with Sida bilateral support (FC with Sida Bilat.), focus countries without Sida bilateral support (FC w/o Sida Bilat.), and other countries. (RG – research groups, NW – scientific networks)

**External Audits**

According to the current agreement with Sida, ISP shall subject grants to third parties exceeding SEK 284,000 to external audits. ISP interprets this to apply to grant allocations transferred for local management, because allocations managed by ISP on requests of research groups and networks are subject to separate audit as a part of yearly external audit of ISPs financial management, following Annex IV to the agreement. In consultation with the Executive Committee to the Board of ISP, this has been further clarified to apply to allocations transferred in excess of the limit amount during a year or a granting period (EC decision §7, 9 March 2015).

Audits of local funds used in 2017 were requested from 26 research groups and networks (and, in some cases, from network nodes; Table 15). One additional research group, sent an audited financial report without prior request.

Only five of the requested reports were received timely. The reasons for late and absent reports were in most cases difficulties in procuring an auditing service, in particular at a reasonable cost in relation to the amount to be audited. No reports were postponed to next year.

Merely two of the received reports was approved in full, after review at ISP, whereas requested 15 reports – and the one submitted voluntarily – were accepted with comments regarding needs of corrective measures. No audit statement was disapproved.

**Table 15.** Overview, per program, of the number of audit requests of 2017 (in some cases including 1 or 2 preceding years), regarding funds transferred for local use, and the number of cases where statements from the auditors were received. The statements were approved in full, accepted with comments/corrections or disapproved. In some cases, statements were not received at all (absent) or the audit was postponed in agreement with the accountable group leader or network/node coordinator

<table>
<thead>
<tr>
<th>Program</th>
<th>Requested</th>
<th>Received</th>
<th>Approved in full</th>
<th>Accepted with comm./corrections</th>
<th>Disapproved</th>
<th>Absent</th>
<th>Postponed</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPICS</td>
<td>14</td>
<td>9(+1)</td>
<td>1</td>
<td>8(+1)</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>IPMS</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>IPPS</td>
<td>10</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>17(+1)</td>
<td>2</td>
<td>15(+1)</td>
<td>0</td>
<td>9</td>
<td>0</td>
</tr>
</tbody>
</table>

ISP is strengthening the financial control, hence the many cases of comments and corrections. Partners failing to submit an audited financial report are subject to particular attention.
5.3 **Staff, Students and Theses**

5.3.1 **Staff in Supported Activities**

In total, 896 staff members were reported to be involved in ISP-supported activities, 23% of them female (Table 7g). In all, 23% of the group leaders and network coordinators\(^\text{19}\) were female. IPICS groups and network reported 30% female staff members, and 30% female leaders, IPMS 21% female staff members and 40% female leaders, and IPPS 18% female staff members and 8% female leaders.

5.3.2 **Students in Supported Activities**

In 2017, totally 1,073 postgraduate students were reported to be active in research groups and networks, benefitting directly or indirectly from ISP support (Table 5). Students may to various degrees enjoy ISP-funded support, or may be supported from other sources. Still, the ISP groups and networks make up the platform for the students’ training, and all reported students are accounted for here. Female students made up 31% of all reported students; 25% of those in Africa, 41% of those in Asia, and 69% of those in Latin America.

There were 442 PhD students (28% of them female), including graduates (Table 5, Table 7h1). Of all PhD students, 106 (24%) were trained on a "sandwich" basis (36% of them female) (Figure 9). IPICS groups and networks reported 163 PhD students (of which 36% female), 43 on sandwich programs (47% female), and 120 on local programs (33% female). IPMS groups and networks reported 124 PhD students (of which 23% female), 34 on sandwich programs (24% female), and 90 on local programs (23% female). IPPS groups and networks reported 155 PhD students (of which 23% female), 29 on sandwich programs (34% female), and 126 on local programs (20% female). Groups and networks in Africa reported 22% female PhD students, those in Asia 51%, and those in Latin America 86% (Table 16).

\[\text{Figure 9. Female and male sandwich (sandw.) and local PhD students, by program.}\]

The total number of students and graduates on the Master level (including MPhil and Licentiate) was 631 (31% of them female; Table 5, Table 8h1). In all, only 16 (3%) of them were trained on a "sandwich" basis (two of them female), and 615 were on local programs (205 of them female; 33%) (Figure 10). IPICS groups and networks reported 185 Master students (of which 44% female), three on sandwich programs (none female), and 182 on local programs (45% female). IPMS groups and networks reported 146 Master students (of which 27% female), three on

\(^{19}\) For IPMS, all node coordinators of EAUMP and SEAMaN are included.
sandwich programs (one of them female), and 143 on local programs (27% female). IPPS groups and networks reported 300 Master students (of which 29% female), ten on sandwich programs (one female), and 290 on local programs 29% female). Groups and networks in Africa reported 29% female MSc (etc.) students, those in Asia 33%, and those in Latin America 50% (Table 16).

Figure 10. Female and male sandwich (sandw.) and local MSc (etc.) students, by program.

Table 16. Proportion of female (F) students (%) of all postgraduate students in activities supported by IPICS, IPMS and IPPS 2017, respectively, by region.

<table>
<thead>
<tr>
<th>Students and region</th>
<th>IPICS, %F</th>
<th>IPMS, %F</th>
<th>IPPS, %F</th>
<th>Total, %F</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td>31</td>
<td>15</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>Asia</td>
<td>63</td>
<td>61</td>
<td>40</td>
<td>51</td>
</tr>
<tr>
<td>Latin America</td>
<td>100</td>
<td>N/A</td>
<td>67</td>
<td>86</td>
</tr>
<tr>
<td>All PhD students</td>
<td>36</td>
<td>23</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td>Master students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td>39</td>
<td>24</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>Asia</td>
<td>49</td>
<td>33</td>
<td>32</td>
<td>38</td>
</tr>
<tr>
<td>Latin America</td>
<td>50</td>
<td>N/A</td>
<td>N/A</td>
<td>50</td>
</tr>
<tr>
<td>All MSc etc. students</td>
<td>44</td>
<td>27</td>
<td>22</td>
<td>33</td>
</tr>
</tbody>
</table>

During the year 90 PhD students graduated (Table 5, Table 7h2, Table 17). Of these, 20 were on sandwich programs (6 of them female; 30%), and 70 were on local programs (28 of them female; 40%). IPICS groups and networks reported 31 graduating PhD students (of which 48% female), nine on sandwich programs (33% female), and 22 on local programs (54% female). IPMS groups and networks reported 32 graduating PhD students (of which 40% female), 8 on sandwich programs (13% female), and 24 on local programs (50% female). In all, 78% of the PhD graduates were on local programs, and 38% were female. On average, the students needed 4.8 years to graduation, 4.8 years on local and 5.0 years on sandwich programs (Table 8j).

During the year 258 MSc (etc.) students graduated (Table 5, Table 7h2, Table 17). The majority, 255 (99%), was on local programs (101 of them female; 40%). IPICS groups and networks
reported 90 graduating Master students (of which 37% female), one male on a sandwich program, and 89 MSc (etc.) graduates on local programs (37% female). IPMS groups and networks reported 100 graduating Master students (of which 55% female). Two males were on sandwich programs, and the remaining 98 MSc (etc.) graduates on local programs (56% female). IPPS groups and networks reported 68 graduating Master students (of which 19% female), all on local programs. In all, 99% of the MSc (etc.) graduates were on local programs, and 39% were female.

Table 17. Summary of chemistry (IPICS), mathematics (IPMS) and physics (IPPS) graduates 2017. Sandwich type training (Sandw.) or Local training is indicated, and gender of graduates. MSc, Phil and Licentiate graduations are denoted “Other”. (L. Am. = Latin America; F = female; M = male; - = Not applicable, no IPMS support in L. Am.)

<table>
<thead>
<tr>
<th></th>
<th>Africa</th>
<th>Asia</th>
<th>L. Am.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sandw.</td>
<td>Local</td>
<td>Sandw.</td>
<td>Local</td>
</tr>
<tr>
<td>PhD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPICS</td>
<td>F 2 M 6</td>
<td>F 1 M 0</td>
<td>F 0 M 0</td>
<td>F 3 M 6</td>
</tr>
<tr>
<td>IPMS</td>
<td>F 1 M 6</td>
<td>F 0 M 2</td>
<td>F 0 M 0</td>
<td>F 1 M 7</td>
</tr>
<tr>
<td>IPPS</td>
<td>F 0 M 1</td>
<td>F 0 M 1</td>
<td>F 2 M 0</td>
<td>F 2 M 1</td>
</tr>
<tr>
<td>Total</td>
<td>F 3 M 13</td>
<td>F 1 M 12</td>
<td>F 1 M 16</td>
<td>F 11 M 28</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPICS</td>
<td>F 0 M 24</td>
<td>F 0 M 47</td>
<td>F 0 M 9</td>
<td>F 0 M 9</td>
</tr>
<tr>
<td>IPMS</td>
<td>F 0 M 2</td>
<td>F 0 M 28</td>
<td>F 0 M 49</td>
<td>F 15 M 55</td>
</tr>
<tr>
<td>IPPS</td>
<td>F 0 M 5</td>
<td>F 0 M 30</td>
<td>F 0 M 8</td>
<td>F 25 M 55</td>
</tr>
<tr>
<td>Total</td>
<td>F 0 M 35</td>
<td>F 0 M 105</td>
<td>F 0 M 66</td>
<td>F 49 M 101</td>
</tr>
</tbody>
</table>

All graduates and theses are specified in Appendix 1.
5.4 Dissemination by Supported Activities

5.4.1 Publications

In 2017, 46% of the 310 publications in scientific journals were in journals listed on Web of Science, with Thomson Reuter impact factors. Another 8% were in journals listed in the Norwegian Register for Scientific Journals, Series and Publishers (NCDR), indicating that, in all, 54% of the journal articles were in quality journals. In addition, 42 publications reported were book chapters, popular publications, etc. (Table 5, Table 18; Appendix 2).

Table 18. Summary of publication data for 2017, per category and program. The number of publications (Publ.) in scientific journals is specified to those with and without Thomson Reuter (TR) impact factors (IF) or NCDR ranking, and whether ISP funding was acknowledged (Y) or not (N). (See further App. 2).

<table>
<thead>
<tr>
<th>Publication category</th>
<th>IPICS</th>
<th>IPMS</th>
<th>IPPS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
</tr>
<tr>
<td>Publ. in Scientific Quality J. (TR or TR+NCRD ranked)</td>
<td>27 / 50</td>
<td>1 / 30</td>
<td>12 / 21</td>
<td>40 / 101</td>
</tr>
<tr>
<td>Publ. in Scientific Quality Journals (NCRD ranked only)</td>
<td>4 / 8</td>
<td>2 / 10</td>
<td>0 / 2</td>
<td>6 / 20</td>
</tr>
<tr>
<td>Publ. in Other Scientific Journals (unranked)</td>
<td>15 / 39</td>
<td>5 / 37</td>
<td>18 / 29</td>
<td>30 / 105</td>
</tr>
<tr>
<td>Books, Chapters, Popular Publ., Technical Reports, etc.</td>
<td>33</td>
<td>2 / 3</td>
<td>4</td>
<td>42</td>
</tr>
<tr>
<td>Total number of publications</td>
<td>176</td>
<td>90</td>
<td>86</td>
<td>352</td>
</tr>
</tbody>
</table>

In Appendix 2, publications are detailed for each program, chemistry, mathematics and physics, and summarized in program-wise tables.

Acknowledgement of ISP

ISP was acknowledged in 27% of the 310 articles in scientific journals; in 28% of the 141 publications in TR-listed "quality journals", in 23% of the NCDR-ranked journals, and in 22% of the 135 publications in "other journals".

ISP was acknowledged in 32% of the 143 chemistry papers reported (in 35% of the 89 "quality" ones and 28% of the 54 "other" ones); in 9% of the 85 mathematics papers (in 7% of the 43 "quality" ones and in 12% of the 42 "other" ones); and in about 37% of the 82 physics papers (in 34% of the 30 "quality" ones and in 38% of the 37 "other" ones). (Figure 11).

Figure 11. Number of articles in scientific journals by program, listed with Thomson Reuter impact factors or unlisted, and with (w) and without (no) acknowledgement of ISP support.

20 Here including also the “quality” articles listed in the Norwegian Register.
5.4.2 Contributions to Conferences, Workshops and Meetings

ISP partners gave 439 contributions to scientific conferences, most of them oral (80%), 194 by IPICS (85% oral), 46 by IPMS (98% oral), and 199 by IPPS groups and networks (72% oral). (Figure 12, Table 5).

There were 132 contributions at the international level (Appendix 3, Table 23; 79% oral), 185 at the regional level (Appendix 3, Table 24; 88% oral), and 122 at the national/local level (Appendix 3, Table 25; 71% oral).

Where contributions were given

Totally 53 contributions of the 132 ones at international meetings were given in Africa (40%, in 17 countries), 38 in Asia (29%, in seven countries), 34 in Europe (26%, in twelve countries), and seven in North America (5%, in two countries). (Figure 13, Appendix 3 Table 23)

Totally 164 contributions of the 185 ones at regional meetings were given in Africa (89%, in 14 countries), eleven in Asia (6%, in ten countries), four in Oceania (2%, all in Australia), and six in Europe (3%, all in Switzerland). (Figure 13, Appendix 3 Table 24)

Totally 45 contributions of the 122 ones at national/local meetings were given in Africa (37%, in eleven countries), 71 in Asia (58%, in four countries), four in Europe (3%, in three countries), and two in South America (2%), one in Bolivia and one in Chile. (Figure 13, Appendix 3 Table 25)
Figure 13. Number of oral (O) and poster (P) presentations at international (INT), regional (REG), and national/local (NAT) conferences, by region where the contribution is given (AFR – Africa, AS – Asia, OC-Oceania, EUR – Europe, N.Am. – North America, S.Am. – South America).

Regional origin of contributing groups and networks

Altogether, groups and networks in Africa gave 98 presentations at international conferences (81% oral), 171 regionally (87% oral), and 49 nationally (71% oral). (Figure 14)

Groups and networks in Asia gave 34 presentations at international conferences (74% oral), 14 regionally (93% oral), and 71 nationally (70% oral).

IPICS LANBIO, in Latin America, gave two presentations at national conferences (both oral).
Figure 14. Number of oral (O) and poster (P) presentations at international (INT), regional (REG), and national/local (NAT) conferences, by region of origin of supported group/network. (AFR – Africa, AS – Asia, LAM – Latin America).

5.4.3 Arranged Conferences, Workshops, Training Courses, etc.

In all, 74 scientific meetings were arranged, gathering almost 6,000 participants (Table 5, Figure 16, Appendix 3 Table 26). In Africa, 51 meetings were arranged in eleven countries, gathering about 4,800 participants. In Asia, 23 meetings were arranged in four countries, gathering almost 1,200 participants.

Figure 15. Share of 153 meetings (%) arranged by IPICS, IPMS, and IPPS, respectively, in Africa, Asia, Europe (Eur), and South America (S.Am.)
5.5 Outputs and Outcomes that were not achieved

One chemistry research group failed to submit the annual activity report for 2017, mainly because the impaired health of the group leader. For the same reason, no application was submitted in 2017, despite invitation. This shows the importance of a back-up in such matters, in particular that a dependable deputy group leader is at hand. For two sandwich students of the group, a budget was reserved to sustain them in 2018 as previously planned, but no other allocation was granted. Still, it is expected that the local students can be maintained, and the PhD students reported in 2016 have been considered active in 2017. Any other achievements of the group in 2017 are expected to be reported in the Annual Report 2018.
SECTION 6: APPLICATIONS AND IMPACT

6.1 Use of Results and Knowledge

In this section, the use of research results is listed, as reported to ISP. The reported use may be in patents and products, in other applications including training, in using skills to influence policy, e.g. in government committees, and through technical development and services. The entries are used in RBM indicator “u”. They are listed country wise and then according to ISP research/network code. Abbreviations not explained here are found in Section 8.

6.1.1 Use of Research Results and Skills

**Bangladesh**

Under the leadership of Professor K S Rabbani, a telemedicine programme launched by the department as early as 2013 using its own technology for hardware and software got momentum when a fund was available from a Government-UNDP-USAID programme named ‘Access to Information’ in 2015, and towards the end of 2015, the university authorities agreed to name the project as, ‘Dhaka University Telemedicine Programme (DUTP)’. DUTP is gaining momentum thanks to the innovative model based on entrepreneurship backed by a philosophy based motivation, software based monitoring, continuous assessment, and effecting necessary modifications of the details. At the end of 2015, there were only 5 rural telemedicine centres while at the end of 2017, it increased to about 30, and in 2017, about 4000 medical consultation with prescriptions were provided to rural patients through these centres. About 70% of these patients were women, children and the elderly. In addition, through the field trial of a mobile phone based version of the same, we provided consultations to about 700 patients in 4 months during 2017. For this segment, about 95% of the patients were women, children and the elderly, which shows the enhanced possibilities of the mobile phone version which takes medical consultation to the homesteads of rural people. Thus, catering to primary and secondary healthcare in the villages where there are no doctors, DUTP has been able to at least reduce the complications that one would face had the primary and secondary care be not available near home. (IPPS BAN:04)

**Bolivia**

During 2017, Carlos Pinto stayed in Bolivia (mainly in Sucre) for a total of ca. 6 months, as part of his commitment to organize and develop the local PhD programs, particularly the one in Biomedical Sciences, at USFX. The programs and their developers have been described in the USFX webpage:

- PhD programs site: http://doctorado.usfx.bo/programa-ciencias-doctorado/programa-doctorado-ciencias-biomedicas/
- Doctoral academic committee site: http://www.usfx.bo/posgrado/comite-academico/comite-academico-doctoral-salud/
- Academic videos of new lines of research developed by Carlos F. Pinto: https://www.youtube.com/watch?v=BNz700jTQj4 (IPICS LANBIO)

**Kenya**

P.G.O. Weke, M.M. Manene & C. Achola have been drafting the South Sudan Syllabi for Actuarial Sci, Applied Statistics, and Mathematics, as experts in the field, 8-12 May. (IPMS EAUMP)
Dr. Simiyu offered consultancy services to the County of Marsabit jointly with GIZ for capacity building in solar PV as well as development of solar PV training programme for the county's vocational training institutions, Sep. (IPPS KEN:02)

Several members of the group (Dr Simiyu, Dr. Waita, Prof. Mwabora) have participated in curriculum development and review in solar PV for the government. (IPPS, KEN:02)

Dr. Simiyu has spearheaded joint partnership between UoNBI and SUNFarming in development of solar PV plants in Kenya through feasibility studies. (IPPS, KEN:02)

Dr. Simiyu has offered consultancy services to the County Governments of Turkana, Marsabit and Kisumu Counties in capacity building in solar PV. (IPPS, KEN:02)

**Mali**

From Sep., the group member participated in a project, RARSUS-SEMALI (Risk Assessment and Reduction Strategies for Sustainable Urban Resource Supply in Sub-Saharan Africa-Focus on Sustainable Energy Supply in Mali) allowing them to study the problems on renewable energy (photovoltaic, wind) and application in urban agriculture. (IPPS MAL:01)

The group is also involved in the supervision of students from PAUWES (Pan African University, Institute of Water and Energy Sciences). (IPPS MAL:01)

The group is developing a new renewable energy research program in Mali together with ITT TH Cologne (Germany). The project is financed by BMBF/DLR Germany. (IPPS MAL:01)

**Uganda**

The results on disease modeling (e.g. Malaria, HIV/AIDS, TB) have been utilized by the Uganda medical research council. (IPMS EAUMP)

Results on Insurance/Finance have been utilized by the stakeholders. (IPMS EAUMP)

### 6.1.2 Policy Influence and Opportunities

The impact and potential influence by members of ISP-supported groups and networks on policy and legislation is given.

**Bangladesh**

Prof. K.S. Rabbani (group leader) has been taken as a member of the Health Technology Task Group (HTTG) of the Geneva based International Union of Physics and Engineering Sciences in Medicine (IUPESM), through which he can contribute to global policy making in relevant issues. (IPPS BAN:04)

**Burkina Faso**

The project leader had a meeting with the Department of Environmental Sciences, 9 June. The purpose of the meeting was the development of a cooperation between this Department and the research group on the topic of the use of mercury (Hg) amalgamation in gold extraction in small-scale mining, which leads to substantial loss of Hg to the environment, and results in health impacts for the miners and ore processors, and local residents, as well as those exposed through consumption of fish from water contaminated with Hg from these activities. (IPICS BUF:02)
Professors Stanislas Ouaro and Hamidou Toure have been involved in the participation on two committees set up by the Ministry of High Education of Burkina Faso. This has lead to two internal reports, on the Virtual University of Burkina Faso and on the Polytechnical Institute of Ouagadougou, respectively.

The group has been involved in the organization of the « African week of energy and Renewable Energy » (Semaine des Énergies et Énergies renouvelables d’Afrique, SEERA) initiated by the Ministry of Energy and its partners, 2-6 May in Ouagadougou. It was a public open event with thousands of participants.

The group participated in the validation workshop of the new law of the energy sector in Burkina Faso, 12 Jan. in Koudougou, with about 70 participants

Cambodia
During the whole 2017, Dr. Chan Oeurn Chey worked actively at the Ministry of Education Youth and Sport as Task Force lead by the Rector of RUPP to work on curriculum reform in Cambodia.

Kenya
Dr. Simiyu has represented the Dept. Physics in stakeholders’ consultative development, review and validation of the Advanced Solar PV Training Curriculum for a period of three years through identification of gaps, skills enhancement and development of competence based training curriculum. The main stakeholders are NITA (mandated with regulating industrial training), ERC (mandated with licensing of practitioners) and KEREA (advocacy).

Laos
Kesiny Phomkeona (F) attended a Project Steering Committee Meeting on Polychlorinated Biphenyl (PCB) Management and Disposal, 29 March, at the Energy Sector at Ministry of Natural Resources and Environment.

Sudan

Tanzania
Dr. J.A.M. Mahugija (M) participated in the Natl. Inception Workshops on Disposal of Polychlorinated Biphenyls (PCBs) Oils contained in Transformers and Disposal of Capacitors containing PCBs in Southern African Countries organized by the Vice-President’s Office Div. Environment, 12 Apr. and 11 May at TANESCO Training Centre in Dar es Salaam.

Uganda
By invitation, group members have participated in Assessment of the Current Environmental Conditions in Lutembe Bay Ramsar site; impacts of anthropogenic activities, with emphasis on pesticide exposure. The reports will be a basis of the government policy in streamlining the management of beaches along water bodies of Uganda.

Zimbabwe
A meeting was held between Vice Chancellors and Heads of Departments of the different Universities in Zimbabwe with the new Minister of Higher Education and the new President of Zimbabwe. In that meeting a policy towards funding research activities for Universities was discussed.
6.1.3 Technical Development and Services

**Bangladesh**

NITUB has in 2017 repaired 8 non-functioning scientific instruments of different educational and research organizations of Bangladesh. The reported book value of these instruments is approximately 344,000 USD and NITUB spent approximately 1,149 USD to repair these instruments. (IPICS NITUB)

Through a grant from ‘Information Society Innovation Fund (ISIF)-Asia’ during 2015-16, IPPS BAN:04 developed a smartphone based telemedicine system so that ‘Roving Telemedicine Operators (RTO)’, mainly women can visit people’s homes in the villages and will link them to doctors in the cities over internet, so people will get the service right at their doorsteps. The group has developed the basic software and hardware for stethoscope sound and ECG signal transfer. With a small funding from the Edward M Kennedy Centre at Dhaka this Smartphone based service was introduced in 4 areas, under the supervision of respective telemedicine centres during 2016 and 2017. Female telemedicine operators went from door to door and allowed patients to consult city doctors right from their homestead. In four months, it was provided service to about 700 patients of which 95% were females, children and elderly. Female patients usually hide many of their ailments because the telemedicine centres are run by mostly male operators. This has given us important feedback and if funds are available this modality may create a revolution in the rural healthcare. (IPPS BAN:04)

**Burkina Faso**

CRSBAN has signed two agreements with NESTLE to follow its program HEALTHY KIDS in primary school and to sensitize the population on the aspect of quality of nutrition. (IPICS RABiotech)

**Kenya**

Dr. Waita installed solar PV systems in 10 sites including 1 secondary school; the total capacity of installed systems being 2.5 KW. (IPPS KEN:02)

Dr. Waita revived 5 already installed systems, which were not working, and supplied and serviced over 15 plug-and-play solar kits with 3 lights, mobile charging. (IPPS KEN:02)

**Zimbabwe**

The activities of the group have led to new scientific strengths. There are now possibilities to carry out the extraction, isolation and purification of phytochemicals within our laboratory without the need to go to another laboratory. New bioassays are introduced for evaluation of antibacterial, antifungal and anticancer properties of phytochemicals. The particular strength will lie in the ability to isolate phytochemicals and evaluate their biochemical properties from plants that uniquely belong to the local environment. (IPICS ZIM:01)

Separation of plant natural products by thin layer chromatography. Courtesy of IPICS ZIM:01.
6.2 Outreach

Here, outreaching activities directed primarily to the general public, undergraduate students, schools, industry and other similar stakeholders are listed. For activities aiming to influence national and international policy, see Section 6.1.2. The entries here are used in RBM indicator “s”. Abbreviations not explained here are found in Section 8.

**Bangladesh**

Mohammad Shoeb (M) acted as Convener to organize the 7th Bangladesh Chemistry Olympiad where 10,000 11th grade students participated, in January and February. (IPICS BAN:04)

![At the 7th Bangladesh Chemistry Olympiad. Courtesy of IPICS BAN:04.](image)

Mohammad Shoeb (M) coordinated a meeting with all former students and researchers who studied in Sweden, and formed a Sweden Alumni Network in Bangladesh acting as a Head of the Network. Mr. Johan Frisell, Ambassador of Sweden to Bangladesh attended. (IPICS BAN:04)

![Opening the Sweden Alumni Network in Bangladesh. From the left: Prof. Liaquat Ali (former IPICS BAN:03), Prof. Nilufar Nahar, Swedish Ambassador Mr. Johan Frisell, Dr. Mohammed A. Aziz, and Dr. Mohammad Shoeb. Courtesy of IPICS BAN:04.](image)
Nilufar Nahar (F) and the female students of the group were interviewed about women in higher education and research, which was published in the Daily Star newspaper, 18 Feb.

(IPICS BAN:04)

There was an incident of death of fish, ducks, frogs, fowls in a flash flood affecting areas of Sunamgonj. Nilufar Nahar (F) was in the fact-finding Committee formed by Bangladesh Chemical Society. She visited the area with Committee members and collected samples and investigated. Later, she revealed the finding in a press conference on 1 Jun., and the news was published in a daily newspaper the next day.

(IPICS BAN:04)

An easy, quick and cheap method was developed to identify the red dye in watermelon, by Tanhaul Islam (M) and Md. Ahsan Habib Khandakar (M), two undergraduate students supervised by Nilufar Nahar (F), and the news was published in a daily newspaper.

(IPICS BAN:04)

Nilufar Nahar (F) and Mohammad Shoeb (M) visited Sweden Embassy Office and met H.E. Ms. Charlotta Schlyter, new Ambassador of Sweden to Bangladesh for outreach activity discussion.

(IPICS BAN:04)

Mohammad Shoeb (M) arranged a seminar entitled “Networking and Discussion on Rohingya Issue”, where H.E. Ms. Charlotta Schlyter, Ambassador of Sweden to Bangladesh, attended.

(IPICS BAN:04)

On the foundation day of Dhaka university (1 July) the Nanophysics laboratory was kept open for general public and students. The Nanophysics group students were present to explain the research activities.

(IPPCS BAN:05)
Prof. Nilufar Nahar (left) and Dr. Mohammad Shoeb (right) with new Swedish Ambassador to Bangladesh, Ms. Charlotta Schlyter. Courtesy of IPICS BAN:04.

Ms. Charlotta Schlyter (Ambassador) visiting the Dept. Chem., Univ. Dhaka, with IPICS BAN:04 leader Dr. Mohammad Shoeb (right) and IPICS BAN:05 leader Dr. Zamir Rausan (left). Courtesy of IPICS BAN:04.

**Burkina Faso**

CRSBAN is a member of the National Council of Nutrition. It participated in more than five meetings 2017, organized by the Minister of Health in Burkina Faso, the NOU agencies, and NGOs on nutrition.

Contribution of CRSBAN to finalization of the Composition Table of African Foods on the behalf of FAO, regarding foods from Burkina Faso, Niger, Ivorist Coast and Senegal. (IPICS RABiotech)

Participation of CRSBAN to a regional meeting sponsored by l’OOAS (Organisation Ouest Africaine de la santé) on the harmonization of nutrition curricula in ECOWACS (CEDEAO) space, 7-9 May, Ouagadougou. (IPICS RABiotech)

Participation of CRSBAN to the elaboration of strategic Plan of Nutrition in Burkina Faso at the request of th government. (IPICS RABiotech)
**Cambodia**
The Dept. Chem. at RUPP has cooperated with Khmer Beverages Limited company, to let one final year MSc student take internship for one semester to write his research thesis.  
(IPICS CAB:01)

The Dept. Chem. at RUPP has initiated cooperation with SGS Cambodia, to let four final year thesis students take internship in their laboratory for one semester.  
(IPICS CAB:01)

Dr. Chan Oeurn Chey, the leader of the supported group CAM:01, was working as supervisor for three talented students, from grade 2 to grade 12, for doing basic research for regional and global science competitions: The congress of Search for SEAMEO Young Scientist 2018, ASEAN Plus Three (including Sweden), The ASEAN Plus Three Junior Science Odyssey (APTJSO 2017) and Global Natural History Day (GNHD 2017). As results, they brought home three bronze medals, four silver medals, one gold medal and one outstanding award from the competitions. All activities were reaching public through national and international media. (IPPS CAM:01)

**Ethiopia**
The Department in collaboration with the Dept. Math., Adana Science Univ., has established an Ethiopian Mathematical Society, so that through it the government, the society, and the industry can be reached. 
(IPMS ETH:01)

The physics research group ETH:01 has, for the fourth year in a row, conducted a short one month training program (three hours per day) for promising 11th grade preparatory high school students, from three public and private preparatory schools in the country. By focusing on talented high school students, they aim to demystify the negative connotation associated with physics among these students and possibly attract them into science in general and physics in particular. The response of the students to the training program as illustrated by the high attendance and low drop-out levels, is very encouraging.  
(IPPS ETH:01)

The Lake Langano earthquake on 27 Jan., of magnitude 5.4 Mw, was widely reported in the rift valley part of the country and the group members conducted massive media briefings. 
(IPPS ETH:02)

Students of 3rd year applied physics from several regional universities visited the seismologic laboratory at AAU for practical sessions.  
(IPPS ETH:02)

**Ghana**
AFSIN MEMBERS promoted the study of Physics, Optics and Photonics through practical demonstration and exhibition organized for the students of Efutu Senior High School in March, and at the Yamoransa Science & Math Club in Oct.  
(IPPS AFSIN)

**Kenya**
J. Katende and J. Ongaro lead the Kenyan teams to the 25th Pan African Mathematical Olympiad and the 3rd Pan African Mathematical Olympiad for Girls (PAMO2017 and PAMOG 2017), held in Rabat, Morocco, 30 June to 7 July. The team also participated at the International Mathematics Olympiad Part sponsorship by CEMASTEA to cover cost of air tickets and subsistence for the seven best Kenyan students.  
(IPMS EAUMP)

J. Ongaro held a talk on Mathematics of Coloring maps at the Alliance High School, to encourage high school students to pursue mathematics.  
(IPMS EAUMP)

The Women in Physical Science in Kenya, led by Lindah Kirinya, visited and talked to three secondary school girls during their career days.  
(IPPS KEN:01/2)
INST presented its research activities at the University of Nairobi Open Day and the Nairobi International Show. (IPPS KEN:01/2)

Dr J. Simiyu has represented the Dept. Phys. in university outreach activities; at the University Open Day 2017, University Exhibition 2017, Nairobi Innovation Week 2017 and Nairobi International Trade Fair 2017, where awareness on utilization of solar as well as innovative ways of utilization were exhibited. (IPPS KEN:02)

Dr J. Simiyu (M) has provided mentorship and career guidance to Kenya Girls High School students through organized learning and career talk visits to the Dept. Phys. by high schools. (IPPS KEN:02)

Dr S. Waita was the motivational speaker at the Kithumani Youth Mentorship Forum, held 30 Dec. at Kithumani Salvation Army Hall, Kithumani Market, Makueni County. (IPPS KEN:02)


The group hosted various high schools, which were shown round the teaching and research laboratories. (IPPS KEN:04)

Group members were involved in the University of Nairobi Open Day as well as the Nairobi International Trade Fair. (IPPS KEN:04)

Mali
The ministry of Education got interested in the first female PhD thesis defence in physics at DER de Physics, USTTB Faculté des Science et technique (Bamako, Mali). The minister publicized the event to promote gender mainstreaming in physical science and promised to help the three girls who defended their master theses in same laboratory. (IPPS MAL:01)

Tanzania
The National Pi Day Celebration was organized by the Math. Assoc. of Tanzania in corporation with Dept. Mathematics, UDSM, and held 13-14 March in Dar es Salaam. Over 2000 primary and secondary school students, and university staff and students attended. (IPMS EAUMP)

A National Mathematics seminar was organized by the Math. Assoc. of Tanzania in corporation with Dept. Mathematics, UDSM, and held 11-19 Sep. at University of Dar es Salaam. Over 170 primary and secondary school students, and university staff attended. The main objective of the seminar is to share teaching and learning experience of mathematics especially on difficult topic to teach and learn. (IPMS EAUMP)

The Tanzania node arranged the 2nd Science Camp for female A-level high-school students. (35 part.) (IPPS MSSEESA)

Uganda
The department continues to carry out its outreach activities via Uganda Mathematical Society. The activities include the annual National Mathematics contest for Primary schools, Secondary schools, National Teachers’ Colleges, Primary Teachers’ Colleges, and Universities participation in PAMO, Annual National teachers conference, and public lectures. At the annual general meetings, the society hosts guests from Government to officiate at the prize giving ceremony of the best candidates in the contest. (IPMS EAUMP)

Dr. Simon K. Anguma, leader of EAARN, held three radio talk shows on education and especially on the importance of science and technology as drivers of social transformation. The Talk shows
were sponsored by Muni University and broadcast over a local FM radio station (Radio Pacis). (IPPS EAARN)

Dr. Simon K. Anguma, leader of the EAARN, held a meeting with teachers, parents, and students in Terego County in Arua District in Uganda. During the meeting, he underscored the importance of treating both girls and boys equally in regard to science subjects. (IPPS EAARN)

Zimbabwe
AiBST has hosted students from Harare Institute of Technology, the University of Zimbabwe, Chinhoyi University of Technology and from 3 high schools. Over hundred students visited and toured the facilities to see how top laboratories look like and function. (IPICS ZIM:AiBST)

As a Community Outreach initiative, a borehole was sited for Elitsheni Primary School, a marginalised school situated in the drought prone Matebeleland South province. (IPPS ZIM:01)

6.3 Strengths and Benefits to Researchers and Partners

This section lists benefits to members of groups and networks and their partners, and to other stakeholders including the public, through awards, honors and promotions (the entries are used in RBM indicator “t”). Benefits and strengths through scientific visits, training events, post doc research visits and networking opportunities besides those listed in Appendix 3, are given in Appendix 4. Abbreviations not explained here are found in Appendix 5.

6.3.1 Awards, Honors and Promotions

Several members of ISP-supported activities have been promoted, commissioned, or received awards during the year. The entries are given essentially as reported, and listed country wise and then according to ISP research/network code.

Bangladesh
Dr. Mohammad Shoeb (M) was appointed Head of the Sweden Alumni Network in Bangladesh. (IPICS BAN:04)
Md. Kamrul Hasan has been promoted to Assistant Professor at the Dept. Chem., Univ. Dhaka. (IPICS BAN:04)
Rafiza Islam (F) and Md. Mizanur Rahman (M), two PhD students, have been awarded Bangabandhu Fellowship from Ministry of Science and Technology for PhD program. (IPICS BAN:04)
Prof. F.A. Khan (M) has been nominated as international member of the Serbian Ceramic Society, and assigned the responsibility as coordinator of the field of Magnetism. (IPPS BAN:02)

In June, Prof. F.A. Khan (M) received the “Elsevier Editorials Award certificate of Outstanding Contribution”, for reviewing the Journal of Materials Chemistry and Physics. The award is given in recognition to the contributions made to the quality of the journal. (IPPS BAN:02)
Dr. Engr. Sheikh Manjura Hoque (F) became project Director for the Capacity build-up of nano and nano-biotechnological laboratories in Materials Science Division, Atomic Energy Centre, Dhaka. (IPPS BAN:02)
In 2017, the work of the group received a ‘Championship’ award at the ‘World Summit of Information Societies Forum’ (WSIS-2017), held in Geneva, in the category of e-health through Access to Information (a2i), a programme of the Prime Minister’s Office of Bangladesh, which provided support to the programme. (IPPS BAN:04)

Dr. M.A. Kadir (M) has become a member of the Executive Committee of the Bangladesh Medical Physics Association for the two-year term 2017-2018. (IPPS BAN:04)

The group member Ms. Tanisha Mehrin (F), who was also a student in this group, has been appointed as a lecturer at the Dept. Phys., Univ. Dhaka, in March. (IPPS BAN:05)

One student graduated from BAN:05, Ms. Nusrat Jahan (F) joined as a lecturer of Physics in Bangabandhu Sheikh Mujibur Rahman Maritime Univ., Bangladesh. Another graduated student of the same batch joined as a lecturer in the East-West Univ., a renowned private university in Bangladesh. (IPPS BAN:05)

One graduate, Mr. Ashikul Islam Dip (M) got full funding to do PhD in the North Carolina State University, USA. (IPPS BAN:05)

One graduate, Mr. Md. Mahfuzur Rahman (M), was selected as a scientific officer in Bangladesh Atomic Energy Commission. (IPPS BAN:05)

Two Masters’ students from the Nanophysics group, Md. Jahirul Islam (M) and Afsana Mimi Raka (F), won research grants for their academic excellence, awarded by Ministry of Science and Technology, Bangladesh. (IPPS BAN:05)

**Burkina Faso**

Dr. Issa TAPSOBA (M) received as an honour from the government of Burkina Faso the “Academic Palm”. (IPICS ANEC)

Prof. Emile Amouzou (M) has been nominated as coordinator of the Food network of food security by CAMES. (IPICS RABiotech)

Dr. Ella Compaore (F) has been nominated as the general secretary of FANUS (Federation Africaine des Societes de Nutrition) at the African continent level. (IPICS RABiotech)

Nomination of Dr. Ella Compaore (F) as technical secretary in food and nutrition for the Minstry of Health of Burkina Faso. (IPICS RABiotech)

Two professors from CRSBAN have been nominated as Presidents of two universities of Burkina Faso: Prof. Nicolas Barro (M) of Univ. Koudou and Prof. Aboubakar Sidiki Ouattara (M) of Univ. Dedougou. (IPICS RABiotech)

CRSBAN participated to the creation of the National Order of Nutrionists of Burkina Faso. (IPICS RABiotech)

CRSBAN has been designated as coordinator of WAFOODS (West Africa FOODS). (IPICS RABiotech)

Dr. Bernard BONZI (M) received the award of Chevalier de l'Ordre national. (IPMS BURK:01)

Dr. Stanislav OUARO (M) received as an honour from the government of Burkina Faso the "Academic Palm". (IPMS BURK:01)
Cambodia
As the results of the appointment of Dr Chan Oeurn Chey (M) as the Vice Dean of the Fac. Sci., he is also the responsible of the Graduate School of Science of RUPP from Oct. (IPPS CAM:01)
Dr. Kimleang Khun (M) was appointed in Aug. as Head of RUPP Dept. Phys. (IPPS CAM:01)
Dr. Kalyan Sou (F) was appointed in Aug. as Dep. Head of RUPP Dept. Phys. (IPPS CAM:01)

Ethiopia
Prof. W. Mammo (M) has been serving as a member of the TWAS (TWAS-ROssa) regional Prize selection committee since August 2017. (IPICS ETH:01)
Dr. S. Admassie (M) was selected to represent AAU and to work with representatives from sixteen prominent universities from all over Africa in the energy thematic area. (IPICS ETH:01)

Dr. Mariamawit Yonathan (F) was assigned a new position at the College of Health Sciences, AAU; Associate Director for Standards, Staff Affairs and Quality Assurance. (IPICS ETH:02)
Dr. Mariamawit Yonathan (F) been nominated Young Affiliate of TWAS. (IPICS ETH:02)

Three staff members were elected as members of the Ethiopian Mathematics Society Executive Committee: Berhanu Guta (chairperson) (M), Tadesse Abdi (Vice chairperson) (M), and Addisalem Abahun (Treasurer) (M). (IPMS ETH:01)

Dr. Atalay Ayele (M) was elected as chairman of the Natural Science Working Group of the Ethiopian Science Academy. (IPPS ETH:02)

Dr. Atalay Ayele (M) was elected EC member of the Eastern and Southern Africa Regional seismological working group (ESARSWG). (IPPS ETH:02)

Ghana
Dr. Jerry Opoku-Ansah (M) was awarded as the Best Postgraduate student for the College of Agriculture and Natural Sciences, Univ. Cape Coast. (IPPS AFSIN)
Dr. Jerry Opoku-Ansah (M) got a new position as faculty member at the Univ. Cape Coast. (IPPS AFSIN)

Kenya
Prof. L.W. Njenga (F) was appointed Director of the Graduate School, UoNBI. (IPICS KEN:01)
Prof. L.W. Njenga (F) was appointed Board member for the Quality Assurance Directorate, UoNBI. (IPICS KEN:01)
Prof. L.W. Njenga (F) was appointed Vice Chair of the Board of the Graduate School, UoNBI. (IPICS KEN:01)

Prof D.K. Kariuki (M) was appointed external examiner for Jomo Kenyatta University of Agriculture and Technology, Dept. Chemistry. (IPICS KEN:01)

Dr. Catherine Lukhoba (F) has been elected chair of NAPRECA-Kenya. She will be assisted by Dr. David Sujee (M) as a Vice Chair, and Dr. Leonidah Kerubo (F) as a Treasurer. (IPICS NAPRECA)
Dr. Damian Maingi (M) was appointed Deputy Vice Chancellor (Academic Affairs) at Kiriri Women’s Univ. Sci. Technol. (KWUST), Nov. (IPMS EAUMP)

Prof. Patrick Weke (M) was appointed Honorary Fellow of the Actuarial Society of Kenya (FeTASK). (IPMS EAUMP)

David Maina (M) was appointed chairman of the College Performance Contracting Committee, a University Management recognition of the competency in the Institute. (IPPS KEN:01/2)

Graduate students from INST are now university faculty members as graduate assistants and Tutorial Fellows in Egerton and Jomo Kenyatta University of Agriculture and Technology (JUAT), Meru Technical University and Technical University of Kenya, and as lecturer or professional researchers in Kiambu Institute of Technology, and in government and private sector. (IPPS KEN:01/2)

Three female students were taken by Kenya Bureau of Standards (KEBS) on their internship program. (IPPS KEN:01/2)

Michael Mangala (M) became a member of The Kenya Nuclear Electricity Board (KNEB) Technical Working Group (TCH) under the Ad Hoc Inter-Ministerial Committee on Nuclear Law. (IPPS KEN:01/2)

Prof. Bernard O. Aduda (M) was re-elected as honorary treasurer of the Network of Africa Academy of Sciences (NSAC) for a further three-year tenure. (IPPS KEN:02)

Collins Mito (M) and Kenneth Kaduki (M) were promoted to the position of Associate Professor. (IPPS KEN:04)

Hudson Angeyo Kalambuka (M) and Kenneth Kaduki (M) were appointed External examiners at North West University (South Africa) and Technical University of Kenya. (IPPS KEN:04)

Prof. Collins Mito (M) served as Chairman, Board of Governor’s, Siver High School, Bondo County. (IPPS KEN:04)

University of Nairobi Dean’s Committee grant of USD 1,250 was awarded to Dr. Zephania Birech (M) to support his research on ‘Opto–magnetic detection of malaria’. (IPPS KEN:04)

Morocco
Prof. Mamia ELRHAZI (F) has been elected President of the Federation of African Societies of Chemistry (FASC). (IPICS ANEC)

Rwanda
Prof. Manasse (M) was appointed Director General of the National Commission of Science and Technology. (IPPS RWA:01)

Prof. Lakhan Lal Yadav (M) was appointed as Director of the African Center for Excellence in Innovative Teaching and Learning Mathematics and Science. (IPPS, RWA:01)

Sudan
Dr Ammar M S Abdalla (M), Assistant Prof, Toxicologist, University of Dongola, was appointed to Director of International Relations in Dongola University. (IPICS ANCAP)

Dr. Moawia I Y Abdalla (M), Assistant Prof., Food Toxicants & Contaminants was appointed to Head of The Food Science & Technology, Fac. Agric. Sciences, Univ. Gezira. (IPICS ANCAP)
Dr Eihab E.M. Alias (M), Associate Prof., Rodenticides, was promoted to Associate Professor and appointed the Head of the Dept. in the Fac. Agric. Sciences, Univ. Gezira. (IPICS ANCAP)

Dr Marwa M E Eltohami (F), Assistant Prof, Heavy Metals Toxicology, Dept. Pesticides & Toxicol., Fac. Agric. Sci., Univ. Gezira, was promoted to Associate Professor. (IPICS ANCAP)

Dr. Hamza M A Kajir (M), was promoted to Assistant Prof of Fungicides in the Dept. of Pesticides & Toxicology, Fac. Agric. Sciences, University of Gezira. (IPICS ANCAP)

Tanzania
Laurent Salehe Shilingi (M) and Agnella Mandia (F) were promoted to Assistant Lecturers at UDSM. (IPMS EAUMP)

Prof. Joseph Buchweishaija (M) got a Presidential appointment as Deputy Permanent Secretary of Trade and Investment (IPPS MSSEESA)

Uganda
Mr. Henry Matovu (M) was appointed Assistant Lecturer at Gulu University. (IPICS UGA:01)

Dr. Patrick Ssebugere (M) was appointed to Lecturer at Dept. Chem., Makerere Univ. (IPICS UGA:01)

Andima Geoffrey (M), a PhD student of the group, has been given a permanent position as faculty member. Two other PhD students of the group have been appointed as part time lecturers. This has strengthened the teaching of astrophysics and space science at undergraduate and Postgraduate (MSc). The course on planet science is now being taught by one of our PhD students. This used to be taught by visiting lecturers. (IPPS UGA:02)

Zimbabwe
The AiBST Next Generation Biomedical Scientists (NGBS) program which had been funded up to end of 2016 was awarded another Welcome Trust funding for 2018-2019. (IPICS ZIM:AiBST)

Prof. Collen Masimirembwa (M) was honored by the Research Council of Zimbabwe with the Robert Gabriel Mugabe Outstanding Research Award (Awarded by the President of Zimbabwe through RCZ; 15 000 USD). (IPICS ZIM:AiBST)
SECTION 7: OTHER PROGRAMS AND EVENTS

Besides the operating core program, reported in the previous sections, ISP carries out assignments by Sida, engages in collaboration with other bodies, disseminates results, creates opportunities for students, arranges and attends to seminars and meetings, and receives or participates in the reception of visitors and delegations.

7.1 Sida Assignments

By assignment by Sida, ISP is managing a number of activities related to the Sida bilateral programs for research cooperation. In 2017, these assignments comprised the coordination on the Swedish side of the programs with Ethiopia, Mozambique, Tanzania, and Uganda, and administrating the payments of subsistence allowance to participants in the bilateral programs with Bolivia, Ethiopia, Rwanda, Tanzania, and Uganda, while in Sweden.

7.1.1 Ethiopia

ISP was in 2017 coordinating the Swedish side of the bilateral programme for research cooperation with Armauer Hansen Research Institute (AHRI) in Addis Ababa, Ethiopia. This agreement includes four Swedish Universities: Uppsala University, Lund University, Karolinska Institute and Örebro University. ([www.isp.uu.se/what-we-do/bilateral-coordination/ethiopia/](www.isp.uu.se/what-we-do/bilateral-coordination/ethiopia/))

7.1.2 Mozambique

A bilateral agreement with Universidad Eduardo Mondlane (UEM) in Maputo, Mozambique, was signed in 2011. In October 2011, ISP was assigned to manage the coordination of the program on the Swedish side, comprising 12 subprograms with collaborating partners in Sweden. The original agreement with Sida for this coordination covered the years 2011-2013, and in December 2013 it was extended to 2014 and 2015. The bilateral agreement was extended to 2016, and ISP’s coordination was also extended, ultimately up to 31 December 2017.

A new bilateral agreement for the period 1 November 2017 - 31 December 2022 has been signed, and ISP has been assigned to manage the Swedish coordination of this program as well.

The Swedish institutions involved in the new bilateral program are: Karolinska Institutet (KI), Uppsala University (UU), Umeå University (UmU), Örebro University (OrU), Gothenburg University (GU), Lund University (LU), Swedish University of Agricultural Sciences (SLU), Luleå University of Technology (LTU), Chalmers University of Technology (CTH), Linköping University (LiU), Royal Institute of Technology (KTH), Jönköping University (JU), Blekinge Institute of Technology (BTH), University of Borås (HB), Stockholm University (SU), Mälardalen University (MdH), University of Gävle (HiG). A number of universities in South Africa are also part of this collaboration, namely: North West University (NWU), Stellenbosch University (SUN), University of the Witswatersrand (Wits), University of Cape Town (UCT), University of Pretoria (UP), University of Western Cape (UWC), University of the Free State (UFS), University of South Africa (UNISA).

The program consists of 21 subprograms, grouped in six thematic areas: Population, health and well-being of the society, Agriculture, nutrition and food security, Natural resources, environment and climate change, Technology and innovation, Education, culture, good governance, ethics and human rights, and Key supporting elements. ([www.isp.uu.se/what-we-do/bilateral-coordination/mozambique/](www.isp.uu.se/what-we-do/bilateral-coordination/mozambique/))
7.1.3 Tanzania

In 2015, Tanzania entered into a new bilateral phase with Sida, covering support to three universities and one agency in Dar es Salaam: Univ. of Dar es Salaam (UDSM), Ardhi Univ. (ARU), and Muhimbili Univ. Health and Allied Sciences (MUHAS), as well as the Tanzania Commission for Science and Technology (COSTECH). The agreement period is from 1 July 2015 to 30 June 2020. In August 2015, ISP signed an agreement with Sida for the coordination of the Swedish activities in this program. The Swedish partners involved in 2017 were Gothenburg Univ., Karolinska Institute, Linköping Univ., Lund Univ., the Royal Institute of Technology, Södertörn Univ., Stockholm Univ., the Swedish Research Council, the Swedish Univ. of Agricultural Sciences, Umeå Univ., and Uppsala Univ. The emphasis for this program phase is on the development of local PhD programs in Tanzania. The number of PhD students to be trained in the framework of the program amounts to 126, including 14 students from the previous program phase. In addition, there are 55 MSc students to be trained, and 27 post-docs. (www.isp.uu.se/what-we-do/bilateral-coordination/tanzania/)

7.1.4 Uganda

ISP is coordinating the bilateral programme for research cooperation with Uganda. This agreement includes five Ugandan universities (Makerere, Busitema, Kyambogo, Gulu and Mbarara University of Science and Technology). The Swedish institutions involved in 2017 were Gothenburg University, Linköping University, Uppsala University, Stockholm University, Royal Institute of Technology (KTH); Mälardalen University, Lund University, Chalmers Institute of Technology, University of Borås, Karolinska Institute and the Swedish University of Agricultural Sciences (SLU). The program consists of 17 subprograms in various fields. (www.isp.uu.se/what-we-do/bilateral-coordination/uganda/)

7.1.5 Payment of Subsistence Allowances to Sida Bilateral Students

ISP continued the Sida assignment to administer the payment of PhD student allowances and insurance costs for PhD students and postdocs who receive support from Sida in Swedish bilateral agreements on research cooperation with Bolivia, Ethiopia, Rwanda, Tanzania, and Uganda. This includes administration of payments of family/child allowances agreed in Sida’s program with Rwanda.

7.1.6 Student Activities

On 13 November, Sida and ISP jointly organized a seminar ”Building future networks”, at Sida in Stockholm. More than 80 students in the Sida bilateral and ISP’s programs, from eight countries (Bangladesh, Bolivia, Ethiopia, Kenya, Mozambique, Rwanda, Tanzania, and Uganda), gathered for a day of interesting talks, discussions and networking.

Speakers and participants at the Sida-ISP ”networking meeting, at Sida in November. Courtesy of ISP.
7.2 Other activities

7.2.1 Strategic Activities

In the fifth and final year of ISP's work in accordance with its Strategic Plan 2013-2017, and the fourth year of work in the current Sida agreement period 2014-2018, the Executive Committee (in its meeting 14 February) established a strategy action plan, which in 2017 comprised the following fields of work.

**Continued work to promote gender equality**

See Section 3.2.2

**Evaluation and follow-up**

**Evaluation of the Eastern Africa Universities Mathematics Programme (EAUIMP).**


**Publication in Acta Universitatis Upsaliensis of the Sri Lanka and Thailand collaboration study.**

The study was published in August, both in printing and electronically (see Section 7.2.3).

**Publication on ISP's web of the study of groups and networks phased out of ISP support 2003 to 2014.** The report was published in December (see Section 7.2.3).

**Effecting the evaluation of the Natural Products Research in Eastern and Central Africa network.**

The evaluation has been postponed.

**Evaluation of the physics networks Materials Science and Solar Energy Network for Eastern and Southern Africa (MSSEESA) and Eastern and Southern African Regional Seismological Working Group (ESARSWG).** The evaluation of MSSEESA was initiated in 2017, while the evaluation of ESARSWG has been postponed.

**Information and communication**

**Establishing the communication plan.** The completion of the communication plan, drafted in 2016, has been postponed to be included in the next overall strategic plan.

**Continue communication on internal, UU, and external level.** Information about dissemination, presentations, and arranged meetings, is provided in Sections 7.2.3 and 7.2.5.

**Fund-raising and other supplementary funding**

**Continue efforts to establish successful fund raising at ISP**

Seven meetings were held in the fund-raising group in 2017, together with an advisory consultant from Brakeley Nordic. The consultant also made a presentation of the results of the work at ISP's Board meeting in December.

**Arrange information events with Swedish universities to increase opportunities for closer collaboration.** No such events were arranged by ISP in 2017, but a presentation with the similar purpose was given at a meeting in Linköping 23 Aug. (See 7.2.6, Invited talks and presentations of ISP)
**Scientific capacity enhancement**

Already in the proposals to Sida 2008, it was suggested that ISP introduces common activities to the program regarding:

- Training on research management
- Training on how to write research proposals and reports
- Training on how to write scientific papers

The Sida agreement and contribution 2008-2010 (extended to 2013), however, didn’t allow for such a development. In the Strategic Plan 2013-2017, though, this quality enhancement issue is again addressed, and with the recruitment of Cecilia Öman, having long experience of giving such training, the activity could be revived. In 2016, it was decided to apply scientific quality enhancing training packages, in particular in the fields of research methodology, research proposal writing, and scientific paper writing, and offer to supported partners. In 2017, Cecilia Öman carried out the following activities:

- 170114-170125: Cecilia Öman and Dr. Sune Erikson (Er DevCo, Sweden) visited the Dept. Chem., Univ. Rwanda to assess chemistry laboratory equipment and to run a workshop on management of laboratories (Functioning advanced scientific equipment, FAST). The visit was partially funded by IPICS RWA.
- 170828-170829: Two-days workshop in research management (ROPE) for supported research groups at Makerere Univ.
- 171018-171019: Workshop on research management (ROPE) with Chemistry Research Team leaders attending the Scientific Reference Group meeting in Cape Town, RSA.
- 171127-171128: Two-day workshop in research management for supported research groups at University of Nairobi, Kenya.

### 7.2.2 Collaboration

**Al Baha University**

In 2017, ISP continued cooperation under the “Service Contract of Academic Support between Al Baha University (ABU), Saudi Arabia, and Uppsala University, International Science Programme (ISP), Sweden”; Service Contract Specification 2014-2017. During 29-30 January, Uppsala University Deputy University Director and ISP Board member Mr Kay Svensson and the Uppsala University Vice Chancellor’s Advisor in International Affairs, Professor Leif Kirsebom, visited ABU, and in April delivered their written reflections suggesting the way forward of the collaboration. This was followed by a visit by the ISP Coordinator Dr. Olle Terenuius 25 October. Besides these travels, and two ongoing PhD programs of ABU staff at UU, no activity took place in the year, and the agreement formally expired 31 December 2017. Before that, however, ABU informally requested a non-cost extension of the agreement to 2018.

**Linköping University (LiU) and University of Rwanda (UR)**

ISP is engaged in the Research Management Program, with LiU, Sweden, and the Directorate for Planning and Development at UR, in the current phase of the Sida bilateral program, started 1 July 2013. In 2017, ISP arranged for one week of training of PhD supervisors, 20-24 March.
Stockholm University

The annual steering committee meeting of the cooperation of ISP with the Faculty of Science at Stockholm University was held in Stockholm 24 May.

Thailand Research Fund and Thailand International Development Cooperation Agency

An agreement between TRF/TICA and ISP/Sida was signed on 2 February 2015. The agreement implies up to three yearly fellowships in the fields of chemistry, mathematics, and physics, for students from Bangladesh, Cambodia, Laos, Myanmar, Nepal, and Vietnam, to carry out three years of PhD training; two years in Thailand (arranged and financed by the Thai partners) and one year in Sweden (arranged and financed by the Swedish partners). In 2017, the first grantee, Thiri Yadanar Htun (F), Myanmar, continued her PhD studies at Suranee Univ. Technol., Thailand, and from May at Chalmers Institute of Technology, Gothenburg, Sweden.

A second call was opened in April 2017, and attracted twelve eligible applications, ten from Myanmar and two from Vietnam. The following three applicants, all from Myanmar, were granted PhD fellowships:

- Mr. Sou Ko Ko Aung, to be registered at the Faculty of Sciences and Technology, Sakon Nakhon Rajabhat University, Thailand, with the Swedish host at Dept. Chemistry, UU. Ms.
- Ms. Moh Moh Aung, to be registered at the School of Physics, Inst. Science, Suranaree Univ. Technol., Thailand, with the Swedish host at Dept. Physics and Astronomy, UU.
- Ms. Ei Ei Phyo Myint, to be registered at the Fac. Medicine, Mahasarakham University, Thailand, with the Swedish host at Dept. Biomedical Sciences and Veterinary Public Health, Swedish University of Agricultural Sciences (SLU), Uppsala

7.2.3 Honors

171201: Leif Abrahamsson was elected chairperson to the Committee for Developing Countries of the European Mathematical Society, for the period 1 Jan. to 31 Dec. 2018.

7.2.4 Dissemination

Publications


Contributions to scientific conferences

Education for Life in Africa Conference, May 19-20, The Hague University of Applied Sciences, The Netherlands

Rebecca Andersson. ISP & the Sandwich Model Model. (P)
17th NAPRECA Symposium, 13-16 Aug., Addis Ababa, Ethiopia

Peter Sundin. The International Science Programme – Long Term Sponsorship of Basic Sciences and New Requirements on the Demonstration of Results. (O)

10th SANORD Annual International Conference, 29 Nov. – 1 Dec., Victoria Falls, Zimbabwe

Rebecca Andersson and Peter Sundin. The Sandwich Model in Postgraduate Training – A Successful Case of Capacity Building in Basic Sciences. (O)

7.2.5 Minor Field Study Fellowships

From 2017, the application and administration processes of Minor Field Studies (MFS) fellowships are centralized at all Swedish universities, and ISP no longer directly awards such scholarships. However, Ernst van Groningen represents the Faculty of Natural Science and Technology in the MFS central committee at Uppsala University, and Carla Puglia is a member of the MFS reference group at the Faculty of Natural Science and Technology.

7.2.6 Seminars, Meetings and Visits

Arranged seminars and meetings

Besides the meetings listed below, ISP held 14 administrative meetings in 2017, three of them dedicated to administrative issues in the coordination assignments of Sida bilateral programs.


170216-170217: ISP Staff Conference, Haga, Enköping, Sweden

170307-170308: First network meeting for Sida- and ISP-funded PhD students in mathematics, Sida, Stockholm.

170628: The Annual Review Meeting with Sida was held at Sida, Stockholm.

170918: ISP Staff Excursion, Uppsala, Sweden.

170921: Fellow evening in collaboration with the Nordic Africa Institute (NAI), and held at their premises in Uppsala, Sweden. Close to 50 participants attended.

171113: Building Future Networks (see 7.1.6)

Fellow evening held in the NAI library, Uppsala. Courtesy of ISP.
**Invited talks and presentations of ISP**

170117-18: Ernst van Groningen, The International Science Program at Uppsala University and the EPS Group for Physics for Development. Presentation at the Netherlands Physics Society (NNV) session about 'Physics for development' at the Physics@Veldhoven conference, the Netherlands.

170209: Ernst van Groningen. Interview on Swedish national television news on astronomical research in Ethiopia.


![Peter Sundin was a speaker at the “Legacy of Hans Rosling” seminar at Karolinska Inst. Courtesy of ISP.](image)

**Participation in other meetings by ISP staff**

170113: Ernst van Groningen participated in the 1st International Conference on Nanomaterials and Photonics Nanotechnology, organized by the Dept. Physics, RUPP, Cambodia. He was a speaker and presented ISP in the opening session.

170120: Leif Abrahamsson and Rebecca Andersson attended the EAUMP coordinators’ meeting, UDSM, Tanzania.


170407-170408: Leif Abrahamsson participated in the annual meeting of the Committee for Developing Countries of the European Mathematical Society, Rome, Italy.
170504-170510: Rebecca Andersson and Carla Puglia attended the ESARSWG (Entebbe) and MSSEESA (Makerere University) Board meetings, Uganda.

The 10th Annual Coordinating Board Meeting of MSSEESA was held 5 May at the Grand Global Hotel, Kampala, Uganda. Courtesy of IPPS.

170518: Cecilia Öman attended a seminar at Sida addressing Public Policies, Migration and Development. The seminar was arranged by Delmi and Sida in cooperation with OECD Development Centre.

170522: Cecilia Öman attended a seminar at IVA addressing Fundraising and leadership as well as International fundraising.

170529: Cecilia Öman Rebecca Andersson attended a seminar with EBA addressing Research Aid. Two EBA reports were launched. “Research Aid revisited – a historically grounded analysis of future prospects and policy options”, and “Research Capacity in the New Global Development Agenda -Mobility, Collaboration and Scientific Production among Ph.D. Graduates Supported by Swedish Development Aid in Africa”

170607: Cecilia Öman attended a seminar with the Embassy of the Republic of Rwanda to the Nordic countries addressing Rwanda- Post genocide reconstruction and fight against genocide.

170631: Cecilia Öman attended a seminar with Stockholm Philanthropy Symposium (SPS).

170620: Carla Puglia and Ernst van Groningen participated in “Smart Rural Development: the SDGs and the New European Consensus on Development”, Brussels, Belgium.

170825: Peter Sundin and Therese Rantakokko participated in Sida’s meeting with Swedish partners in the research cooperation with Bolivia.

170925: Peter Sundin participated in a meeting with the Saudi Minister of Education, Dr. Mohammed Al-Issa, arranged by the Swedish Ministry of Foreign Affairs, held at the KTH Royal Institute of Technology, Stockholm, Sweden.

171003: Peter Roth participated in a meeting with the Migration Agency, the Swedish Institute, and Sida to discuss migration matters.
171024: Cecilia Öman attended a seminar with EBA and FUF addressing "Ägarskap och snabba resultat – målkonflikter och framtidsutsikter" (Ownership and rapid results – conflicting objectives and perspectives on the future).

171024: Olle Terenius participated in the "Sweden Education Day" at the Swedish Embassy in Riyadh, Saudi Arabia.

171030-171102: Carla Puglia, Ernst van Groningen, Hossein Aminaey, Rebecca Andersson, and IPPS Scientific Reference Group member Eva Wäckelgård, participated in the Workshop on Solar Energy Materials for Energy Need in Africa in Honor of the Late Prof. Rogath Kivaisi, and 2nd MSSEESA Conference, Dar es Salaam, Tanzania. Ernst van Groningen was a speaker and presented ISP in the opening session.

171108-171109: Ernst van Groningen, and Hossein Aminaey participated in the conference on 40 years of Research Cooperation between Sweden and Tanzania, Dar es Salaam, Tanzania.

171110-171112: Leif Abrahamsson participated in the 10th International Conference on Science and Mathematics Education in Developing Countries, Mandalay, Myanmar.

171117: Peter Sundin participated in a round table discussion on comparative research directions in European-African science funding and funders interests, organized by Dr. Stefan Skupien from WZB Berlin Social Science Center, Berlin, Germany.

171123: Olle Terenius participated in a Sida "Actors’ meeting" (Aktörsmöte) on the development of a new strategy for development cooperation with Somalia, Sida, Stockholm, Sweden.

171204: Ulrika Kolsmyr participated in the inauguration of new accommodation facilities for international guests, arranged by the Uppsala University Housing Office, Uppsala, Sweden.

171208: Peter Sundin participated in a Sida "Actors' meeting" (Aktörsmöte) on Strategy for capacity development in support of sustainable development and implementation of Agenda 2030, and development and widening of the Swedish resource basis, Sida, Stockholm, Sweden.

171210: ISP staff Archana Yadav Ganganaboina, Pravina Gajjar, and Ulrika Kolsmyr guided ISP and Sida fellows from Bolivia, Ethiopia, Kenya, Myanmar, and Uganda at the Nobel prize award ceremony in Stockholm City Hall.
Visiting Persons and Delegations

ISP received or participated in the reception of the following guests and delegations.

170320-170324: ISP hosted a delegation from RUPP Faculty of Engineering, Department of Bio-Engineering, seeking Swedish scientific partners for a planned Sida bilateral program for research cooperation in Cambodia.

170521-170524: ISP hosted a delegation from RUPP Faculty of Science, Department of Environmental Science, seeking Swedish scientific partners for a planned Sida bilateral program for research cooperation in Cambodia.

170529-070602: ISP hosted a delegation from RUPP Faculty of Science, Department of Mathematics, seeking Swedish scientific partners for a planned Sida bilateral program for research cooperation in Cambodia.

170821-170825: ISP hosted a delegation from RUPP Faculty of Science, Department of Biology, seeking Swedish scientific partners for a planned Sida bilateral program for research cooperation in Cambodia.

171102: ISP received a delegation from TWAS, Programme Coordinator Max Patel and Research Grant Secretary Payal Patel.

171113: Leif Abrahamsson presented ISP to a visiting delegation from Burkina Faso, Prof. Alkassoum Maiga, Ministre de l'enseignement supérieur, de la recherche scientifique et de l'innovation, Burkina Faso and Minister of Higher Education, Scientific Research and Innovation, and Prof. Alain Sissao, Special Advisor.
APPENDIX 1. ACADEMIC THESES

The graduations listed below are given countrywise. For each county, students reported by chemistry groups and networks ar given first, followed by those reported for mathematics and physics. The entries are given essentially as submitted to ISP. “Sandwich” (Sandw.) theses are written by students with intermittent visits to a collaborating supervisor in another country. “Local” theses are by students being trained at the home university. (F = female; M = male). A few students conduct full time training with foreign hosts abroad. In ISP statistics, they are categorized as sandwich students.

PhD graduations

Bangladesh

Farzana Khalil (F). Dichlorodiphenyltrichloroethane in Environmental Samples and Human Blood of Chittagong Chemical Complex Area and Pesticide Residues in Some Vegetable Samples. (IPICS BAN:04, Sandw.)

Tonima Mustafa (F). Organohalogen Residues of Fishes from Different Trophic Levels. (IPICS BAN:04, Local)

Farzana Saleh (F). Health Effects of Isoflavones from Bangladeshi Soymilk in Postmenopausal Women. (IPICS BAN:04, Local)

Abida Sultana (F). Chemical Contaminants in Rice, Spice and Vegetable Samples. (IPICS BAN:04, Local)

Zerin Sultana, Munia (F). Studies of Chemical contaminants in different food staff. (IPICS BAN:04, Local)

After the successful PhD thesis defense my Ms Farzana Khalil. Courtesy of IPICS BAN:04.

Palash Chandra Karmaker (M). Magnetization behavior of Co-rich Nd-Fe-B based nanocomposite magnets with Tb substitution (IPPS BAN:02, Local)

Zaman, Sharmin (F). Microbiological and Physico-Chemical Assessment of Surface Water Processed with Low-Cost and Sustainable Technology. (IPPS BAN:04, Local)

**Botswana**

Getahun Gurmesssa Tadese (M). Phytochemical investigation, antibacterial and antioxidant activities of compounds from *Erythrina brucei*. (IPICS NABSA, Sandw.)

**Burkina Faso**

Yssouf KARANGA (M). Phytochemical study, flavonoids analysis and assessment of antifungal properties of *Euphorbia hirta* L. (IPICS ANEC, Local)

Boukaré Kaboré (M). Evolution spatiale et temporelle de résidus d'endosulfan, de DDT et de fénitrithon dans les sols et les sédiments: mise en évidence de profils chimiques en résidus de pesticides. (IPICS BUF:01, Local)

Corneille Bakouan (M). Caractérisation de quelques sites latéritiques du Burkina Faso: Application à l'élimination de l'arsenic dans les eaux souterraines. (IPICS BUF:02, Sandw.)

Hamidou Compaore (M). Recherche de substances à activités antibactériennes produites par des souches de moisissures isolées d’aliments locaux au Burkina Faso. (IPICS RABiotech, Local)

Wendpoulom dé Aimé Désiré Kaboré (M). Caractérisation phénotypique et profil de résistance aux antibiotiques des souches de *Streptococcus, Aerococcus, Entereococcus, Pantoea, Klebsiella, Citrobacter* et *Acinetobacter* isolées des infections endodontiques à Ouagadougou, Burkina Faso. (IPICS RABiotech, Local)

Dinanibè Kambire (M). Caractérisation moléculaire et profil de sensibilité des pneumocoques aux antibiotiques avant et après l’introduction du PCV-13 au Burkina. (IPICS RABiotech, Local)

Marceline Makalao Mouti (F). Caractérisation et valorisation de 10 fruits sauvages consommés dans trois Département du Tchad. (IPICS RABiotech, Local)

Cécile Harmonie Otoidobiga (F). Impact des bactéries sulfato-Réductrices et des Bactéries Réductrices de fer sur la production du riz des fonds de vallées sous drainage de sub-surface: cas de la vallée du Kou et de Tiéfora au Burkina Faso. (IPICS RABiotech, Local)

W. Pauline Ouedraogo (F). Biodépollution des sols contaminés par les hydrocarbures totaux et étude des souches fongiques dans ces sols. (IPICS RABiotech, Local)

Mamadou Sadji (M). Valorisation de la pastèque (*Citrullus lanatus*, Thunb.) par l'utilisation de ses substances bioactives en technologie alimentaire: intérêt nutritionnel et sanitaire (IPICS RABiotech, Local)

Serge Samandoulougou (M). Étude des résidus d'antibiotiques dans les denrées alimentaires d'origine animale consommées au Burkina Faso: cas des viandes bovines et des œufs. (IPICS RABiotech, Local)

Regis Longue Sokpe (M). Aspects épidémiologiques du virus de la panachure jaune du riz en République centrafricaine. (IPICS RABiotech, Local)
Roamba BRAHIMA (M). Contribution à l’étude mathématique d’écoulement bicouche.  (IPMS BURK:01, Local)

Désiré OUEDRAOGO (M). Etude de modèles mathématiques de l’épidémiologie pour des populations en croissance exponentielle.  (IPMS BURK:01, Sandw.)

Amadou Konfé (M). Thermal study and design of a solar refrigerator with adsorption.  (IPPS BUF:01, Local)

Germain Ouedraogo (M). Numerical and experimental study of the air flow in natural convection in a solar tower: application to the drying of the gombo.  (IPPS BUF:01, Local)

Boureima Kabore (M). Climatisation d’une habitation en zone sahélienne à l’aide du principe du puits canadien.  (IPPS BUF:01, Local)

Boukare Ouedraogo (M). Conception, réalisation et étude du fonctionnement en convection naturelle d’une cellule solaire de conservation de produits agroalimentaires: application à l’oignon.  (IPPS BUF:01, Local)

Adama Ouedraogo (M). Modeling with 3 D of the influence of the waves radios on a photovoltaic cell with polycrystalline silicon under monochromatic illumination.  (IPPS BUF:01, Local)

Kossi B. Imbga (M). Confort thermique et efficacité énergétique dans un habitat en zone Sahélienne.  (IPPS BUF:01, Local)

Boubacar Soro (M). Study with 3d of the influence of the temperature on the electronic and electric parameters of a photovoltaic cell with concentration under magnetic field.  (IPPS BUF:01, Local)

**Cambodia**

Len Meas (M). Dispersive and Strichartz estimates for the wave equation inside cylindrical convex domains.  (IPMS SEAMaN, Sand.)

**Costa Rica**

Beatriz Quesada Montano (F). Hydro-Climatic Variability and Change in Central America: Supporting Risk Reduction Through Improved Analyses and Data  (IPPS NADMICA, Sandw.)

**Côte d’Ivoire**

Urbain Niangoran (M). Optimization of spirulina algae growth by controlled spectral lighting.  (IPPS AFSIN, Local)

**Ethiopia**

Zewdneh Genene Wolkeba (M). Molecular design, synthesis and characterization of conjugated polymers for application in organic optoelectronic devices.  (IPICS ETH:01, Sandw.)

Wondimu Wolde Kassu (M). Iterative Approximation of Fixed Points of p-nonexpansive Multivalued Mappings in Modular Function Spaces.  (IPMS ETH:01, Local)

Nasir Asfaw Kelifa (M). Asymptotic Zeros of Hypergeometric Bernoulli Polynomials.  (IPMS ETH:01, Local)
Haider Ebrahim Yesuf (M). Heck Correspondence for Automorphic Integrals with Infinitely Many Poles. (IPMS ETH:01, Local)

Atakilti Araya Teklehaymanot (M). On entire solutions of quasilinear elliptic equations. (IPMS ETH:01, Local)

Natea Hunde (M). The Real Holomorphy Ring and Sums of Powers in Rational and Elliptic Function Fields over The Field of Real Numbers. (IPMS ETH:01, Local)

Tesfale Hadush (M). Approximating Common Solutions of Variational Inequality, Equilibrium and Fixed Point Problems. (IPMS ETH:01, Local)

Tolasa Adugna (M). Steady state thermodynamics of minute heat engines. (IPPS ETH:01, Local)

Bizuneh Gebremichael (M). Characterization of semiconductors organic polymers. (IPPS ETH:01, Local)

**Honduras**

Diana Fuentes-Andino (F). Flood Hazard Assessment in Data-Scarce Basins: Use of alternative data and modelling techniques (IPPS NADMICA, Sandw.)

**Kenya**

Loise Muiva Mutisya (F). Phytochemical analysis of five *Tephrosia* species found in Kenya for antimalarial and radical scavenging principles. (IPICS KEN:02, Local)

Martha Induli (F). Phytochemical studies of some species of the Asphodelaceae. (IPICS KEN:02, Local)

Aduda Jane Akinyi (F). A GARCH Model for Pricing Crack Spread Options on Oil Futures Allowing for Volatility Spillovers. (IPMS EAUMP, Local)


Kiratu Beth Nyambura (F). On Weyl's Spectrum for Some Classes of Operators in Hilbert Spaces. (IPMS EAUMP, Local)

Rugiri, Peter Githara (M). On Some Aspects of Spectral Theory of Operators in Hilbert Spaces. (IPMS EAUMP, Local)

Ndun'gu Reuben Muiruri (M). Modeling the Effects of Periodic Environmental Factors on Epidemic Malaria. (IPMS EAUMP, Local)

Carolyne A. Ogutu (F). The Construction of Multinomial Lattices for Option Pricing. (IPMS EAUMP, Sandw.)

Rachel Sarguta (F). Four Routes to Mixed Poisson Distributions. (IPMS EAUMP, Local)

Samuel Mwaniki Gaita (M). Airborne particulate matter studies from a typical Sub-Saharan African city: Nairobi, Kenya, and an Equatorial high-altitude site: Mount Kenya. (IPPS KEN:01/2, Sandw.)
Samson Murangiri Mukaria (M). Analysis of traffic police awareness, attitude and practices on motor vehicle air pollution in the Nairobi Central Business district and environs. (IPPS KEN:01/2, Local)

Charles Opiyo Ayieko (M). Characterization of spectrally selective FeMnCuO$_4$ solar absorber paint on textured aluminum substrates for solar thermal collector applications at temperatures under 200 °C. (IPPS KEN:02, Local)

John Njagi Nguu (M). Fabrication and Characterization of TiO$_2$/Nb$_2$O$_5$ Composite Photo-Electrodes Deposited Using Electrophoretic Technique for Application in Dye Sensitized Solar Cells. (IPPS KEN:02, Local)

Zipporah Wanjiku Muthui (F). Study of the Structural, Electrical and Magnetic Properties of Heuslers Alloys of Type Mn$_2$VZ(Z=Al, In) for Spintronic Application. (IPPS KEN:02, Local)

Luka Dina Domtau (M). Pore Size Enhancement in TiO$_2$ Thin Films for Applications in Dye-Sensitized Solar Cells. (IPPS KEN:02, Local)

Mali

Sekou Sala Guindo (M). Dynamique des éléments minéraux dans les systèmes de culture de blé et riz dans les régions nord du Mali: potentiel de minéralisation de la matière organique dans le sol. (IPICS MAL:01, Local)

Souleymane Dambé (M). Phosphorus disponibility of farming soils in the Office du Niger (IPICS MAL:01, Sandw.)

Soumaïla Dembéle (M). Les aspects probabilistiques, statistiques et algorithmiques de l’étude de l'assemblabilité dans le Web mining (implémentation et applications dans l'espace Web de la sous-région.) (IPMS BURK:01, Sandw.)

Harouna Sangaré (M). Loi forte des grands nombres pour les variables arbitraires ou associées et Théorème central limite pour les suites de variables aléatoires associées. (IPMS BURK:01, Sandw.)

Mama Sangaré (F). Detection of some leaf diseases of tropical plants by spectroscopic and multimodal study of microscopic images. (IPPS MAL:01, Local)

Myanmar

Thida Lin (F). A Study on Network Center Location Problems. (IPMS SEAMaN, Local)

Nang kham Paung (F). The Existence and Non-Existence of Perfect Matchings in Graphs. (IPMS SEAMaN, Local)

Nilar Thein (F). A Study on Geometric Dual of Planar Graphs. (IPMS SEAMaN, Local)

Mon Mon Aung (F). A Study on Balanced Network Flows. (IPMS SEAMaN, Local)

Lei Lei Win (F). Discontinuous Galerkin Methods for Steady Navier-Stokes Equations. (IPMS SEAMaN, Local)

Po Po Aung (F). Vortex Motion in a Viscous Fluid. (IPMS SEAMaN, Local)
Tin Moe Lwin (F). Vortex Motion on Some Special Surfaces. (IPMS SEAMaN, Local)

Khaing Zin Thu (F). Vortex Motion in a Stratified Fluid. (IPMS SEAMaN, Local)

Win Ko (M). Packing and Covering in Variety of Graphs. (IPMS SEAMaN, Local)

Wai Lwin Tun (M). Spanning Trees with Prescribed Properties. (IPMS SEAMaN, Local)

Su Su Wai (F). A Study on Cayley Graphs on Symmetric Groups. (IPMS SEAMaN, Local)

Zin Mar Thwe (F). Comparative Study of Λ^*-p Model and K^-(pp) Model for ^3He(K^-,n)K^- pp Production. (IPPS MYA:01, Local)

Hnin Hnin Hlaing (F). Theoretical Interpretation on D(π^+,K^+)X Missing Mass Spectrum of J-PARC E27 Experiment. (IPPS MYA:01, Local)

**Nigeria**

Nnemeka Edith Ihegwuag (F). Slow release formulations of chlorpyrifos and dichlorvos using native starch and starch-silver nanoparticles as matrices. (IPICS SEANAC, Sandw.)

**Rwanda**

Kurujyibwami Celestin (M). Admissible transformations and group classification of Schrödinger Equations. (IPMS EAUMP, Sandw.)

Celestin Kurujyibwami from Univ. Rwanda, theses defence 1 June 2017. (Courtesy of IPMS EAUMP)

**Senegal**

Sylvain KOUMLA (M). Contribution à l’étude quantitative d’une classe d’équations intégrales différentielles à retard en dimension infinie. (IPMS BURK:01, Sandw.)
Tanzania

Godfrey Omare Mauti (M). Investigations study on antifeedant properties of *Dioscorea sansibarensis* on storage pests. (IPICS NAPRECA, Sandw)

James Mgaya (M) Synthesis of industrial chemicals from cardonol and anacardic acid components of cashew nut shell liquid. (IPPS MSSEESA, Local)

Tunisia

Marwa Haddaoui (F). Sensors and biosensors based on nanometric metal oxides. (IPICS ANEC, Sandw.)

Mohamed Ali Ben Aissa (M). Modulation of opto-spectroscopic properties of silver and copper nanoparticle organizations. (IPICS ANEC, Local)

Uganda

Christine Kyarimpa (F). Evaluation of insecticidal potency of the essential oil and structure elucidation of the bioactive compounds from *Tagetes minuta*. (IPICS ANCAP, Local)

Fred Mayambala (M). An Eigendecomposition-Based Method for Large-Scale Mean-Variance Portfolio Optimisation with Extension to the Cardinality Constrained Model. (IPMS EAUMP, Sandw.)

Patrick Mungufeni (M). Trends and Modeling of Ionospheric Irregularities over the African low latitude region during quiet geomagnetic conditions. (IPPS UGA:02, Local)

Atim Michael Robson (M) Phase-load balancing in electric power distribution network using fuzzy logic technique: A case study of Uganda electric power sector. (IPPS UGA:02, Local)

Zimbabwe

Nyarai Desiree Soko (F). Pharmacokinetics and pharmacogenetics of Rosuvastatin in healthy Zimbabweans. (IPICS ZIM:AiBST, Local)

Pamidzai Dzomba (F). Speciation and persistence of tetracycline antibiotics in the aquatic environment: Characterization in terms of a linear rate model. (IPICS ANCAP, Local)

Charles Teta (M). Effects of urban effluents, metals and pesticides on fish reproductive health. (IPICS ZIM:02; Sandw)
Other postgraduate theses

Theses regard MSc graduations unless otherwise indicated (MPhil or Licentiate degrees).

Bangladesh

Sumon Kumar Roy (M). Characterization of Streptozotocin induced Type 2 Diabetes Mellitus Long Evans Model Rats. (IPICS ANRAP, Local)

Anowar Hosen (M). Chemical and biological studies of leaves and twigs of Anogeissus rivularis and some hypoglycemic herbal formulations. MPhil. (IPICS BAN:04, Sandw.) (IPICS BAN:05, Sandw.)

Anowar Hossain Khan (M). Organochlorine Compounds and Heavy Metals in Sediment Samples from Coastal Area of Bangladesh. (IPICS BAN:04, Local)

Jannatun Noor Jeouty (F). Studies of microplastic, organochlorine compounds and toxic metals in marine fish samples of Sundarban region. (IPICS BAN:04, Local)

Md. Mazharul Islam (M). Organochlorine Compounds and Arsenic, Cadmium and Lead in Marine Fish Samples of Bangladesh. (IPICS BAN:04, Local)

Most. Salma Khatun (F). Bioactive Secondary Metabolites from Plant Averrho abilimbi. (IPICS BAN:04, Local)

Rabiul Islam (M). Studies of fatty acid compositions and level of Cr and Hg in marine fish samples. (IPICS BAN:04, Local)

Rehnuma Tabassum (F). Study of Water Quality Parameters and Environmental Contaminants in the Aquatic Ecosystem of the Bay of Bengal. (IPICS BAN:04, Local)

Shipra Sarker (F). Heavy Metal Contamination of Anti-diabetic Herbal Preparations Formulated in Bangladesh. (IPICS BAN:05, Local)

Sharmin Parvin (F). Estimation of toxic metal with some specific macro and micro mineral contents of different types of dates available in different markets of Dhaka city in Bangladesh. (IPICS BAN:05, Local)

Md. Aminul Islam (M). Structural, electrical and magnetic properties of (Fe1-xMnx)75P15C10 amorphous alloys. (IPPS BAN:02/1, Local)

Md. Mahamudul Hasan (M) Study of the thermomagnetic properties of AlNiCo V magnetic ribbon. (IPPS BAN:02/1, Local)

Md. Saif Istiaque (M). Synthesis and comparative study of structural and mechanical properties of Hydroxyapatite (Ca_{10}(PO_{4})_{6}(OH)_{2}) (IPPS BAN:02/2, Local)

Kazi Rumanna Rahman (F). Preparation and characterization of Al substituted Ni-Cu-Zn ferrites. (IPPS BAN:02/2, Local)

Md. Alamgir Hossain (M). Effect of rare earth metal substitution on the magnetic and transport of Ni-Zn ferrites. (MPhil) (IPPS BAN:02/2, Local)
Probal Roy (M). Study of hyperthermia of folate chitosan coated cobalt ferrite nanoparticles for cancer treatment. (IPPS BAN:02/2, Local)

Iffat Nur Esha (F). Investigation of multiferroic properties of Ni–Zn based ferrite and Ba-Ti based ceramic composites via standard solid state reaction method. (IPPS BAN:02/2, Local)

Muhammad Asif Haider (M). Structural, Ferroelectric and Ferromagnetic properties of \((1-x)\)BaTiO\(_3\) + \(xCu_{0.1}Co_{0.9}Fe_2O_4\) multiferroic composite. (IPPS BAN:02/2, Local)

Md. Al-Amin (M). Effect of Eu\(^{3+}\) doping on structural, electrical and magnetic properties of Ni\(_{0.4}\)Zn\(_{0.45}\)Cu\(_{0.15}\)Fe\(_{1.6}E_{0.4}\) ferries. (IPPS BAN:02/2, Local)

Fatema Tuz Zohora Toma (F). Study of the Structural, Electrical and Magnetic Properties of Calcium and Strontium Substituted Barium Titanate (BaTiO\(_3\)) Ceramics. (IPPS BAN:02/2, Local)

Md. Rabiul Hasan (M). Synthesis of \((1-x)\)BiFe\(_{0.9}La_{0.1}O_3+x(Ni_{0.6}Zn_{0.4}Fe_{0.9}V_{0.06}O_4)\) nanostuctured multiferroic composites and study of its structural, magnetic and electrical properties. (IPPS BAN:02/2, Local)

Rawdah Mahbub (F). Investigation of the Influence of Annealing Temperatures on the Structural Properties of Magnetisum Ferrite Nano Particle for In Vitro Hyperthermia Application. (IPPS BAN:02/2, Local)

Nayan Das (M). Effect of Cr\(^{3+}\) doping on structural, electrical and magnetic properties of Ni\(_{0.9}\)Co\(_{0.2}\)Cr\(_{x}\)Fe\(_{2-x}\)O\(_4\) ferrites. (IPPS BAN:02/2, Local)

Ummay Habiba (F). Synthesis, structural and magnetic properties of barium strontium ferrites using hematite of analytical grade and magnetite from cox’s bazar beach sand. (IPPS BAN:02/2, Local)

Shammi Mahbub (F). Study the Structural, Electrical and Magnetic Properties of Iron substituted Barium Titanate (BaTiO\(_3\)). (IPPS BAN:02/2, Local)

Anwar Hossain (M). Study of hyperthermia of folate chitosan coated cobalt ferrite nanoparticles for cancer treatment. (IPPS BAN:02/2, Local)

Md. Sohel Sikder, (M). Study of structural and electrical of chitogen doped with zirconia. (IPPS BAN:02/2, Local)

Ferdusy Yesmic (F). Study of microstructure and electrical properties of zirconia composite ceramics doped with Titania. (IPPS BAN:02/2, Local)

Rusho Rushdi Zahid (M). Image Reconstruction Algorithm for Pigeon Hole Imaging (PHI). (IPPS BAN:04, Local)

Das Debasish Nayan (M). Detection of anemia by measuring the redness of palpebral Conjunctiva. (IPPS BAN:0, Local 4)

Hasan Mahmudul (M). Development of Digital Transcranial Magnetic Stimulator for Deep Brain Stimulation. (IPPS BAN:04, Local)

Ullah Thuhid (M). Design and Development of Optical Muscle Contraction Sensor. (IPPS BAN:04, Local)
Munim Ashraful (M). Study & analysis of Cervical Spondylotic Radiculopathy and Myelopathy (CRM) in young computer users by using Distribution of F-Latency (DFL).
(IPPS BAN:04, Local)

(IPPS BAN:04, Local)

Mehdi Hasan (M). Development of Multichannel Intraoperative Neuromonitor.
(IPPS BAN:04, Local)

(IPPS BAN:04, Local)

Ohiduzzaman Md. (M). Thyroid Uptake of 99mTc And Its Agreement With 131I For Evaluation of Thyroid Function.
(IPPS BAN:04, Local)

(IPPS BAN:04, Local)

Mahmud, Syeda Rufaida (F). Breast Tissue Characterization Using Pigeon Hole Imaging.
(IPPS BAN:04, Local)

(IPPS BAN:04, Local)

Ashikul Islam Dip (M). Catalyst Induced Crystallization of Regenerated Silk Fibroin Solution.
(IPPS BAN:05, Local)

(IPPS BAN:05, Local)

(IPPS BAN:05, Local)

Burkina Faso

Amidou TALL (M). Contribution à l’élaboration de capteurs électrochimiques pour la détection des métaux lourds dans les eaux: cas du thallium.
(IPICS ANEC, Local)

Hamidou GANAME (M). Phytochemical screening of Dicliptera verticillata, a medicinal plant acclimated in Burkina Faso.
(IPICS ANEC, Local)

(IPICS ANEC, Local)

Nabomo Hien (M). Analyse chimique comparative de combinaisons binaires d'extraits de trois plantes aromatiques: Eucalyptus camaldulensis, Cymbopogon citratus, Mentha piperita.
(IPICS BUF :01, Local)

Ahmed Dougouna Djoufouna (M). Habitudes alimentaire et hypertension artérielle des adultes volontaires âgés de 20 à 75 ans au Centre Hospitalier Universitaire de Kara/Togo.
(IPICS RABIotech, Local)
Alice Ouedraogo (F). Evaluation quantitative de la stratégie de fortification domiciliaire en micronutriments des aliments de complément pour les enfants de 6 à 23 mois dans le district sanitaire de Nanoro (Burkina Faso). (IPICS RABiotech, Local)

Alladoumbé Ngarbaye (M). Antibiorésistance des souches de *Salmonella* isolées chez les enfants de 0 à 5 ans souffrants de diarrhée dans la ville de N’Djamena (Tchad): cas de l’hôpital de la mère et de l’enfant. (IPICS RABiotech, Local)

Arouna Ouedraogo (M). Procédés de production du lait caillé et évaluation de la qualité physicochimique et microbiologique du lait frais et du lait caillé: cas de la ville de Ouagadougou/Burkina Faso. (IPICS RABiotech, Local)

Baperman Abdel Aziz Siri (M). Connaissances et pratiques des mères sur l’alimentation du nourrisson et du jeune enfant, situation nutritionnelle et facteurs associés en milieu rural dans le district sanitaire de Ouargaye au Burina Faso. (IPICS RABiotech, Local)

Bassibila Zoungrana (F). Analyse de la performance et du coût de la prise en charge de la malnutrition aigüe sévère avec complication (MASaC) au Centre de Récupération et d’Éducation Nutritionnelle (CREN) du Centre Hospitalier Régional de Kaya (CHR de Kaya). (IPICS RABiotech, Local)

Dieudonné Belembaongo (M). Evaluation des connaissances des élèves et des enseignants sur les pratiques d’ANJE dans les communes de Yako et de Bokin (Burkina Faso) avant l’intervention du projet SEMUS. (IPICS RABiotech, Local)

Dieudonné OUATTARA (M). Optimisation d’un biomarqueur salivaire d’exposition des bovins aux piqûres des glossines basée sur une combinaison des peptides synthétiques. (IPICS RABiotech, Local)

Elsie Viviane Ilboudo (F). Effets de la transformation des produits à base de mil (bouillie, fura et galette) sur la digestibilité in vitro de l’amidon et sur l’index glycémique. (IPICS RABiotech, Local)

Fatoumata Ilboudo (F). Evaluation qualitative de la stratégie de fortification domiciliaire en micronutriments des aliments de complément pour les enfants de 6 à 23 mois dans le district sanitaire de Nanoro (Burkina Faso). (IPICS RABiotech, Local)

Ganamé Abasse Ouedraogo (M). Prévalence et profil de résistance des entérobactéries productrices de la bêta-lactamase à spectre élargi (BLSE et les *Staphylococcus aureus* methicillin résistants (SARM) isolés au Laboratoire National de Santé Publique (Ouagadougou, Burkina Faso). (IPICS RABiotech, Local)

Hawa Cheick Kamate (F). Contribution à la valorisation du fonio: Caractérisations technologique, nutritionnelle et microbiologique du Djouka, un mets traditionnel à base du fonio. (IPICS RABiotech, Local)


Ibrahima SANOU (M). Caractérisation physicochimique de 15 variétés de *Sorghum bicolor* cultivées au Burkina Faso. (IPICS RABiotech, Local)
Issa Sanogo (M). Evaluation de l’impact de la stratégie PB mères sur la PCIMA dans le district sanitaire de Sabou. (IPICS RABiotech, Local)

Kadidia Zounogo Zare (F). Appréciation du niveau de connaissance des parents d’élèves sur les pratiques d’ANJE dans les communes de Yako et de Bokin (Burkina Faso). (IPICS RABiotech, Local)

Mahamadé Goubgou (M). Impact des emballages et de la conservation sur la qualité nutritionnelle, microbiologique et organoleptique des biscuits de sorgho non enrichis et enrichis au Moringa et à la spiruline. (IPICS RABiotech, Local)

Mahamat Ahmat Ahmat (M). Etude de la susceptibilité aux antibiotiques des souches de *Pseudomonas aeruginosa* isolées au laboratoire d’analyses médicales de l’hôpital de la mère et de l’enfant de N’Djamena, Tchad. (IPICS RABiotech, Local)

Mawuena Gott’Liebe GOKA (F). Contribution à l’évaluation des qualités microbiologique et nutritionnelle des purées de tomates produites à base de 3 variétés de *Solanum lycopersicum* cultivés au Togo. (IPICS RABiotech, Local)

Minamba Onadja Edith (F). Valorisation de farines locales de complément et utilisation dans la récupération nutritionnelle des enfants sévèrement malnutris au CREN MORIJA, Ouagadougou. (IPICS RABiotech, Local)

Natacha Kere (F). Effets des transformations du maïs sur la digestibilité in vitro de l’amidon et sur l’index glycémique prévisible. (IPICS RABiotech, Local)

NDONG ELLA Corneille (F). Efficacité de la stratégie de prévention de la transmission du VIH de la mère à l’enfant à Libreville (Gabon). (IPICS RABiotech, Local)

Nicole Ehnzoumbo Digali (F). Caractérisation physicochimique de 14 variétés de *Sorghum bicolor* cultivées au Burkina Faso. (IPICS RABiotech, Local)

Safiatou Bello (F). Démarche qualité dans les industries Agroalimentaires: évaluation des bonnes pratiques au sein de l’entreprise Unité Vivrière du Faso à Ouagadougou. (IPICS RABiotech, Local)

Safiatou Traore (F). Effets des transformations du fonio sur la digestibilité in vitro de l’amidon et sur l’index glycémique prévisible. (IPICS RABiotech, Local)

Sidbéwèndé Sandrine Rouamba (F). Evaluation de la vulnérabilité alimentaire des ménages de Oueglega et impact sur l’état nutritionnel des enfants de moins de cinq ans. (IPICS RABiotech, Local)

Somwaoga Daniel Ouedraogo (M). Profil clinique et itinéraire thérapeutique des enfants malnutris aigus dans le district sanitaire de Bousé. (IPICS RABiotech, Local)

Souleymane Kone (M). Prévalence des souches de *Staphylococcus aureus* résistantes à la méthicilline (SARM) dans des établissements de santé de la ville de Ouagadougou (Burkina Faso). (IPICS RABiotech, Local)

Sountongnoma A. Yameogo (M). Étude de la valeur nutritive de différentes variétés de Niébé produites au Burkina Faso: Aspects Nutritionnels. (IPICS RABiotech, Local)
Sylvie Rakiswéndé Zongo (F). Prise en charge en interne et en ambulatoire des enfants dépistés malnutris aigus sévères dans le district sanitaire de Koudougou. (IPICS RABiotech, Local)

Wendlamita Casimire Tarama (F). Effet du traitement du paludisme simple par les combinaisons thérapeutiques à base d’artémisinine (CAT) sur la réponse humorale chez les enfants vivant dans une zone à transmission stable du paludisme au Burkina Faso. (IPICS RABiotech, Local)

Yolande Itsiembou (F). Caractérisation Morphologique et technologique de quelques variétés de manioc en usage au Gabon. (IPICS RABiotech, Local)

Roland SILGA (M). Stabilisation frontière et avec retard de l’équation des ondes. (IPMS BURK:01, Local)

Noufou RABO (M). Modèle de population structurée pour la différenciation cellulaire. (IPMS BURK:01, Local)

Koutou Ousmane (M). Modélisation mathématique et contrôle optimal de la dynamique de transmission du paludisme. (IPMS BURK:01, Local)

Ouédraogo Hamidou (M). Modélisation mathématique du système poisson-plancton en présence de toxine. (IPMS BURK:01, Local)

Mamadou Saria (M). Effect of incidence angle and intensity of radio waves on the performance of a silicon solar cell. (IPPS BUF:01, Local)

Sare Ramatou (M). Bifacial silicon solar cell's electrical parameters determination under external magnetic field and monochromatic illumination. (IPPS BUF:01, Local)

Konate Ramatou (M). Impact of doping on the quantum efficiency of a polycrystalline bifacial solar cell. (IPPS BUF:01, Local)

Khamis Guim (M). Formulation and characterization of a material with low thermal conductivity and good mechanical resistance to compression. (IPPS BUF:01, Local)

Kapioko René (M). Contribution to the promotion of the use of Compressed Earth Blocks (BTC), as structural elements, carriers in the individual houses with levels (R + 1) for the case of the city of Ouagadougou. (IPPS BUF:01, Local)

**Cambodia**

Borith, Peou (M). Determination of metals As, Cd and Pb in fishes of Japanese foods in Sao Paulo (Brazil). (IPICS CAB:01, Local)

Bros, Sieng (M). Metal accumulation (Cr, Ni and Zn) in Sediment of Southeast Asia Countries. (IPICS CAB:01, Local)

Chandy, Oeu (F). Determination of Phosphorus (P) in crop soil at Tboung kmum Province. (IPICS CAB:01, Local)

Chansy, Nourn (M). Clothing and Toxicity Substances. (IPICS CAB:01, Local)
Chantrea, Lang (M). Liquid Waste Management in Petroleum Refinery. (IPICS CAB:01, Local)

Ccheon Siphal, Bun (F). Laboratory Management and Chemical Waste. (IPICS CAB:01, Local)

Menglin, Khin (F). Chemical Composition, detection of fatty acids. (IPICS CAB:01, Local)

Sreymech, Koun(F). Fatty acids of local Coconut (Coconut milk and Coconut oil). (IPICS CAB:0, Local)


**Cameroon**

NDONG SILIKI ARIANE KESNEL (F). Élaboration d’un capteur ampérométrique a base de sciure d’Ayous: application a l’électroanalyse de l’acide Ascorbique. (IPICS ANEC, Local)

DZEMZE KAGHO Frank Junior (M). Effet de l’urée sur quelques propriétés physicochimiques d’un sol acide cultivé de la ville de Yaoundé. (IPICS ANEC, Local)

MEGHA NOUTEZA ARMEL (M). Étude de l’inhibition de la corrosion de l’acier C38 en milieu HCl 1M par l’extrait d’alcaloïdes de Rauvolfia macrophylla Staf. (IPICS ANEC, Local)

KAMAHA TCHEKEP Armand Gutemberg (M). Application du graphene Oxyde a l’électroanalyse d’un colorant cationique «le Bleu de Methylene. (IPICS ANEC, Local)

TCHOUMI Firmin Parfait (M). Synthèse d’une zéolith à partir d’une kaolinite camerounaise: application à l’élaboration d’un capteur pour la détection du paracétamol. (IPICS ANEC, Local)

WAMBA TCHIO Odilon Romaric (M). Activité inhibitrice de la fraction hydroalcoolique des feuilles de ficus pimulalinn. sur la corrosion de l’acier C38 en milieu HCl 1M. (IPICS ANEC, Local)

NZONE Tassontio Vianey (M). Synthèse et caractérisations d’un composite par polymérisation in-situ de la β-cyclodextrine sur une smectit: Application à l’électroanalyse du paraquat. (IPICS ANEC, Local)

Djuidjie Kaptue Pelagie Grace (F). Application du procéde d’electrocoagulation a l’élimination du 4-chloro-2-nitroanilined’un effluent synthetique. (IPICS ANEC, Local)

**Ethiopia**

Tsion Simeneh (F). Syntheses of benzothiadiazole- and thiazolopyridine-based copolymers. (IPICS ETH:01, Local)

Desalegn Yilma (M). Syntheses of conjugated polymers based on pyrrolobenzotriazolesdione and pyrrolobenzothiadiazoledione. (IPICS ETH:01, Local)

Gossa Dare (M). Anodic stripping voltammetric determination of Pb(II)ions at poly(8-aminonaphthalene-2-sulphonic acid)/bismuth film-modified electrode. (IPICS ETH:01, Local)
Birhane Haile (M). Photoelectrocatalytic Reduction of Oxygen at Conjugated Polymers/PCBM Bulk Heterojunctions. (IPICS ETH:01, Local)

Cheru Talbachew (M). Excluded volume effects on the conformation of semi-flexible 2D ring polymers. (IPPS ETH:01, Local)

Getachew Girma (M). Dynamical phase transition of a one-dimensional transport process in fungal growth. (IPPS ETH:01, Local)

Alula Gebre Giorgis (M). Diffusion of a single polymer chain in a crowded media. (IPPS ETH:01, Local)

Guta Hunde (M). Investigating static and dynamic properties of a fully flexible ring polymer. (IPPS ETH:01, Local)

Tesfay Kahsay (M). Structural properties of polymer brush with varying grafting density. (IPPS ETH:01, Local)

Tesema Kebede (M). Effects of Temperature on mobility in a disordered organic semiconductor of different charge carrier densities under the action of different applied electric fields. (IPPS ETH:01, Local)

Alemayehu W/Meskel (M). Transport properties of charge carriers as a function of carrier densities in disordered organic semiconductor. (IPPS ETH:01, Local)

Tesfaye Alemu (M). Effect of electric field on the mobility in a disordered organic semiconductor of different charge carrier densities at different temperature values. (IPPS ETH:01, Local)

Bane Bayisa (M). Effect of boron dopant concentration on charge carrier mobility in crystalline silicon. (IPPS ETH:01, Local)

Sultan Gemechu (M). Charge carrier transport properties in phosphorous doped crystalline silicon. (IPPS ETH:01, Local)

Fekadu Legesse (M). Monte Carlo simulation of diffusion coefficient and average energy of charge carriers in a disordered organic semiconductors. (IPPS ETH:01, Local)

Dagne Wordofa (M). Monte Carlo simulation of photon transport through matter. (IPPS ETH:01, Local)

Kenya

Bernard Kipngetich (M). Dissipation studies of pesticides used cattle dips in Bureti sub-county and assessment of residue levels in water, soil and sediments. (IPICSANCAP, Local)

Boniface Nderi Kamau (M). Assessment of dissipation Rates of Ridomil Gold and Actara 25WG pesticides on Potatoes and Snow Peas in Nyandarua County. (IPICSANCAP, Local)

Maurine Atieno Otieno (F). Study of water purification using clay impregnated with n-doped titanium dioxide –case study Lake Victoria Basin-Homa Bay County. (IPICSANCAP, Local)

Emily Kwamboka Okwaro (F). Assessment of the fate of selected pesticides used on flowers and vegetables in Naivasha area. (IPICSANCAP, Local)
John Okonjo Ochieng (M), Investigation and characterization of pyrolysis products of wood debris in fire analysis. (IPICS ANCAP, Local)

Salia S. Sheriff (M), Degradation and Adsorption of Lambda-Cyhalothrin on Athi River and Coastal Soils and Sediments in Kenya. (IPICS ANCAP, Local)

Kiunga Josphat Kinyua (M). An ethnotaxonomical, morphological and chemotaxonomic study of Kenyan Catha edulis (Miraa). (IPICS KEN:02, Local)

DANIEL KARIUKI WAWERU (M). Noncommutative Groebner Basis on Quiver Algebras. (IPMS EAUMP, Local)

ROBERT AYIECHA MAKANGA (M). The Numerical Solution for Laminar Boundary Layer Flow Over a Flat Plate. (IPMS EAUMP, Local)

MATHIAS NTHIANI MUIA (M). Discontinuous Galerkin Finite Element method for solving Equations in Ocean Circulation. (IPMS EAUMP, Local)

MURIUKI K. PATRICK (M). Mathematical Swerve Analysis Of An In-Flight Volleyball Through Compressible. (IPMS EAUMP, Local)


JAMES KIGUNDA KABORI (M). Inverse Galois Problem. (IPMS EAUMP, Local)

ANNAH MWIKALI MULI (F). Use of Laplace Transform in Solving the Basic Difference Equations of Birth. (IPMS EAUMP, Local)

Wasonga Lameck Otane (M). On Numerical Ranges of Some Operators in Hilbert Spaces. (IPMS EAUMP, Local)

NICHOLAS KIBIWOTT BETT (M). Modelling and Forecasting Mortality and Longevity Risk. Based on Insuicient Data: Kenyan Population. (IPMS EAUMP, Local)

PETER OYOO MAINA (M). On Weyl Spectrum and Quasi-Similarity of Operators in Hilbert Spaces. (IPMS EAUMP, Local)

LILIAN OWINO (F). Fertility Differentials Between Mombasa and Nairobi Counties Based On KDHS 2014. (IPMS EAUMP, Local)

MECHA N. PETER (M). Continuous and Discrete Mixtures of Order Statistic from an Exponential Distribution and its Generalizations. (IPMS EAUMP, Local)

DOMINIC INGOSI SAMBULI (M). Application of Logistic Regressions to Test Equality of Resource Allocation for Malaria Control in Kenya. (IPMS EAUMP, Local)

MOMANYI REINPETER ONDEYO (M). Generating Probability Distributions Based on Burr Differential Equation. (IPMS EAUMP, Local)

KIGUTA JOHN GIKONYO (M). Option Pricing with Stochastic Volatility Correlated to the Underlying Process. (IPMS EAUMP, Local)
VANIS KEMUNTO MAKORI (F). Modelling of Auto Insurance Claims Using Discrete Probability Distributions. (IPMS EAUMP, Local)

NANCY CHEROTICH BOR(F). Compartment by compartment allometric equations for *Eucalyptus grandis* in Agroforestry systems in Kenya. (IPMS EAUMP, Local)

GITHINJI REUBEN THUITA (M). Determinants of Health Insurance Uptake Among Women in Kenya: An Application of Discriminant Analysis. (IPMS EAUMP, Local)

ABUGA JAMES GEKARA (M). Modeling and Determining Risk Factors of Malaria Among Children in Kenya. (IPMS EAUMP, Local)

JEREMIAH MBARIA MUCUNU (M). Modelling School Factors and Performance in Mathematics and Science in Kenyan Secondary Schools Using Canonical Correlation Analysis. (IPMS EAUMP, Local)


YVES BYISHIM (M). Evaluation of Time to Termination of Life Insurance Contracts With Benefits Calculations. (IPMS EAUMP, Local)

DANCUN ONYANGO OGUTA (M). Analysis of Significance of Research Metrics on Quality of Research Publications in African Between 2012-2016. (IPMS EAUMP, Local)

Edwin Agoi Kisame (M). Development of an instrument solar charger for use in field measurements in remote areas. (IPPS KEN:01/2, Local)

Evelyne J. Cheruiyot (F). Environmental radiation monitoring using thermoluminescence and liquid scintillation techniques in Kwavonza area, Kitui county. (IPPS KEN:01/2, Local)

Nehemiah Kipkirui Koech (M). Analysis of heavy metals, minerals and radionuclides in heavy sands from Tiva and Mwita Syano rivers, Kitui County. (IPPS KEN:01/2, Local)

Stephen O. Tollah (M). Development of a Prompt Gamma Neutron Activation Analysis (PGNAA) system at the Institute of Nuclear Science and Technology (INST). (IPPS KEN:01/2, Local)

Anselim M. Mwaura (M). The design and characterisation of an electrohydrodynamic multinozzle atomizer for thermal desalination processes. (IPPS KEN:01/2, Local)

Cavin Omondi (M). Distribution of heavy metals in sediments of River Nzoia. (IPPS KEN:01/2, Local)

Justine Sageka Nyarige (M). Deposition and Characterization of Antimony (Sb) and Phosphorous (P) co-doped Zinc Oxide (ZnO) Films for Opto-electronic Applications. (IPPS KEN:02, Local)

Kibet Too Philemon (M). Carbon Dioxide Capture capabilities of calcium Oxide and carbon nanotube: An *ab Initio* Study. (MSc). (IPPS KEN:02, Local)

Deborah Wayua Musyoka (F). Malaria Diagnostics by Chemometric Laser Induced Breakdown Spectrometry of Blood. (IPPS KEN:04, Local)
Sophie Jepkemoi Kipkwony (F). Definition and characterization of seismic source zones: implications for seismic hazard assessment in Kenya and its vicinity. (IPPS KEN:05, Local)

Mali

Mamadou Coulibaly (M). Fertilization of maize by the microdose technique. (IPICS MAL:01, Local)

Yacouba Diallo (M). Etude des caractéristiques des argiles du Mali: cas de la zone Office du Niger. (IPICS MAL:01, Local)

Mariam Diop (F). Amélioration de la solidité à la lumière du colorant naturel de *Lannea microcarpa* sur les fibres de coton. (IPICS MAL:01, Local)

Adama Dolo (M). Etudes des caractéristiques des argiles du Mali: cas de la zone de Djenné. (IPICS MAL:01, Local)

Mohamed Mariko (M). Contribution des polymères dans la stabilisation des sols des chaussées. (IPICS MAL:01, Local)

Daouda Tangara (M). Optimisation des paramètres de dosage par spectrophotométrie d’absorption atomique (SAA) des minerais sulfurés de Morila. (IPICS MAL:01, Local)

Laos

Bouasy DOUNGSAVANH (F). Traffic Modelling and some Inequalities in Banach Spaces. (IPMS SEAMaN, Local)

Kedtysack XAYSANADASY (M). Some Ordinary Differential Equation Problems in Liquid Crystal Cells. (IPMS SEAMaN, Local)

Khankham VONGSAVANG (M). Burgers’ Equation and Some Applications. (IPMS SEAMaN, Local)

Myanmar

Poe Ei Phyu (F). Generation Lift on an Aerofoil. (IPMS SEAMaN, Local)

Sabae Htun (F). Second Order Partial Differential Equations in Polar and Cylindrical Coordinates. (IPMS SEAMaN, Local)

Khet Khet Mon (F). Second Order Partial Differential Equations in Rectangular Coordinates. (IPMS SEAMaN, Local)

Yu Zana Khin Zaw (F). Laminar Steady Flow between the Walls. (IPMS SEAMaN, Local)

Wai Wai Hteik (F). Applications of Maximum Principle for Optimal Problems. (IPMS SEAMaN, Local)

Jue The New (F). Applications of Operator Equations to the Solutions of Ordinary Differential Equations. (IPMS SEAMaN, Local)

Khin Yupar Win Shwe (F). Ring Homomorphism and Maximal Ideals. (IPMS SEAMaN, Local)
Hnin Hnin Wai (F). Linear Differential Equations and their Some Applications. (IPMS SEAMaN, Local)

May Thant Zin (F). Some Properties of Topological Spaces and Topological Vector Spaces. (IPMS SEAMaN, Local)

Aung Kyaw (M). Some Classes and Properties of Rooted Trees. (IPMS SEAMaN, Local)

Ngwe Yi Tun (F). Norm of an Operator and its Applications. (IPMS SEAMaN, Local)

Yi Myint (F). Some Useful Methods for Solving Linear System of Equations. (IPMS SEAMaN, Local)

Ei Khet New (F). Viscous Flow over a Flat Plate in Boundary Layer. (IPMS SEAMaN, Local)

Khaing Zar Kyaw (F). Domination Concepts and Queens Graph. (IPMS SEAMaN, Local)

Hnin Aye Wai (F). Image Systems of Source, Sink and Doublet in Two-Dimensional Motion. (IPMS SEAMaN, Local)

Win Su San (F). A Study on Interpolation of Argument and Central Difference Formulae. (IPMS SEAMaN, Local)

Khaing Zin Oo (F). Image of Vortex in Two-Dimensional Motion. (IPMS SEAMaN, Local)

May Ye Too (F). Some Results on Trees and Spanning Trees. (IPMS SEAMaN, Local)

San Win Htun (M). Some Potential Flows in Two Dimensions. (IPMS SEAMaN, Local)

Kyi Kyi Htay (F). Viscous Flow Through Pipe Cross-Sectional Shapes. (IPMS SEAMaN, Local)

Phyo Phyo Wai (F). Motion of Vortices in an Inviscid Fluid. (IPMS SEAMaN, Local)

Zin Htwe Aung (M). Some Numerical Methods and a General Quadrature for Differential Equations. (IPMS SEAMaN, Local)

Tin Yi Win (F). Ideals and Homomorphism of Lattices. (IPMS SEAMaN, Local)

Nway Nway Hlaing (F). Circuits and Boolean Functions. (IPMS SEAMaN, Local)

Han Ni Soe (F). Some Factorizations of Square Matrix. (IPMS SEAMaN, local)

Nan Mon (F). A Study on Laplace Transforms and Hankel Transforms. (IPMS SEAMaN, Local)

Myat Thu Zar Htwe (F). Solutions of Unilateral Polynomial Matrix Equations. (IPMS SEAMaN, Local)

Thin Thin Hlaing (F). HB Graphs and their Properties in Planar Graphs. (IPMS SEAMaN, Local)

Nan Kay Thi Win (F). Evaluation Homomorphisms on Groups and Rings. (IPMS SEAMaN, Local)
Hlaing Hlaing Myint (F). Two-Dimensional Steady Flow between Parallel and Non-Parallel Walls. (IPMS SEAMaN, Local)

Hnin Luu Phyoe (F). Bounded and Continuous Functions on Complete Metric Spaces. (IPMS SEAMaN, Local)

Chit Chit Zaw (F). Dirichlet Problems involving Boundary-Value Problems. (IPMS SEAMaN, Local)

Nyein Nyein Ei (F). Some Classes and Properties of Ideals of a Ring. (IPMS SEAMaN, Local)

Pyae Sone Mon (F). Study on the Motion of a Regular n-Polygonal Array of Identical Vortices. (IPMS SEAMaN, Local)

Yin Nwe Nyein (F). Solving Maximum Flow Problems in Networks. (IPMS SEAMaN, Local)

Ei Thinzar Win (F). Finding Minimal Spanning Trees in a Graph. (IPMS SEAMaN, Local)

Aye Phyu Zin (F). Laplace Transform and its Applications. (IPMS SEAMaN, Local)

Nway Nway Khaing (F). Sum and Product of Ideals. (IPMS SEAMaN, Local)

Hnin Phyu Zin Thet (F). Some Special Functions involving Eigenvalues and Eigenfunctions. (IPMS SEAMaN, Local)

Kay Thi Wai (F). The Numerical Solution of Ordinary Differential Equations. (IPMS SEAMaN, Local)

Swut Swut Phyu (F). Some Properties of Plane Symmetries. (IPMS SEAMaN, Local)

Su Myat Noe (F). Finding Maximal Matching in a Graph. (IPMS SEAMaN, Local)

Thwe Thwe Aung (F). Some Properties of Mean Distance in Graphs. (IPMS SEAMaN, Local)

Khaing Wai Wai Htun (F). Slow Motions of a Sphere. (IPMS SEAMaN, Local)

Htet Htet Aung (F). Some Properties of Boolean Lattice and Boolean Algebra. (IPMS SEAMaN, Local)

Ei Mon Kyaw (F). Minimum Costs between Two Cities of Transport Network in Mandalay Region. (IPMS SEAMaN, Local)

Rebekah (F). Practical Experimental Approach for the Determination of Radionuclides in IAEA Reference Materials. (IPPS MYA:01, Local)

Ei Ei (F). Determination of Performance of SPECTRO XEPOS EDXRF Spectrometer for Alloy Samples. (IPPS MYA:01, Local)

**Senegal**

Elvarough Mohamed Baby (M). Influence of the electrofunctionalization of poly(Nphenylpyrrole) with benzenesulfonicacidon for lead detection in aqueous solution. (IPICS ANEC, Local)
Seck Rama (F). Analyse de la Stabilité et Recherche d’un Contrôle Optimal pour un Modèle épidémique SIR. (IPMS BURK:01, Local)

Papa SENE (M). Approximation de zéros d’applications maximales monotones dans les espaces de Banach. (IPMS BURK:01, Local)

Mamadou NIANG (M). Algorithme explicite pour des équations intégrales de Hammerstein avec des opérateurs hémicontinues et monotones bornés. (IPMS BURK:01, Local)

Babatounde Abdoul Kabirou (M). Contrôlabilité d’une classe d’équations intégrodifférentielles stochastiques. (IPMS BURK:01, Local)

Issala, Louk-Man (M). Existence et unicité de solutions d’une classe d’équations intégrodifférentielles stochastiques dépendant du temps de type neutre dirigées par un mouvement Brownien fractionnaire. (IPMS BURK:01, Local)

Ndiaye Penda (F). Bourse et gestion de portefeuille: cas de la BRVM. (IPMS BURK:01, Local)

Seck Khady (F). Gestion des risques d’assurance et applications. (IPMS BURK:01, Local)

GBAGUIDI AMOUSSOU T. Amour (M). Existence et unicité de solution d’équations différentielles stochastiques fonctionnelles neutres avec retard infini dans un espace abstrait. (IPMS BURK:01, Local)

Kakpo Marie Reine Angélique (F). Comportement exponentiel des solutions faibles d’une classe d’équations intégrodifférentielles stochastiques à retard infini. (IPMS BURK:01, Local)

DIOUF, Mbaye (M). Modélisation de l’état structural des conduites d’eaux usées. (IPMS BURK:01, Local)

GUEYE, Cheikh (M). Equation différentielle; application à la capture du dividende démographique. (IPMS BURK:01, Local)

Tendeng Rama (F). Etude du modèle de Black-Scholes et du modèle de Heston. (IPMS BURK:01, Local)

Diop, Amadou (M). Contrôlabilité d’équations intégrodifférentielles stochastiques à condition non locale. (IPMS BURK:01, Local)

Tanzania

Tatu Kiyunigi Kilatu (F). Investigation on Mosquito Repellent Properties of Essential Oils of Ethulia conyzoides and Satureja imbricata Plant Species. (IPICS ANCAP, Local)

Pancras Mtega (M). Levels of aflatoxins in maize and maize products from selected regions of Tanzania. (IPICS ANCAP, Local)

Aweza Fundi (F). Numerical simulation of singularly perturbed heat equation using finite element method. (IPMS EAUMP, Local)
Raymond Elias Kitengeso (M). The effects of magnetic fields on an unsteady mixed convective boundary layer flow of an electrically conducting fluid with temperature dependent properties. (IPMS EAUMP, Local)

Hamisi Sudi (M). Statistical analysis of the factors affecting growth of small and medium enterprises in Tanzania. (IPMS EAUMP, Local)

Laurent Salehe Shilingi (M). A comparative mortality investigation in south Indian states. (IPMS EAUMP, Local)

Simeon Mayala (M). Mathematical modelling of hiv viral dynamics with antiretroviral treatment. (IPMS EAUMP, Local)

Agnella Mandia (F). Isolation of Microinsurance from Commercial Insurance in India. (IPMS EAUMP, Local)

Innocent, Sosoma (M). Effect of variable viscosity on boundary layer flow over a stretching surface with non-uniform heat source/sink. (IPMS EAUMP, Local)

Johnson Allen Kessy (M), Some Fixed Point Theorems for Hybrid mappings in Partial Metric spaces. (IPMS EAUMP, Local)

Aggrey H. Rodgers (M). Corrosion Inhibitione of Mild Steel by Gum Exudates from Acacia melacocephala and Acacia drepanolobium in Acidic Medium. (IPMS EAUMP, Local)

**Tunisia**

Mohamed Mastouri (M). Preparation of surfaces modified with benzoquinone derivatives - Application to biosensors. (IPICS ANEC, Local)

Marwa Mefteh (F). Advanced DNA architectures for the development of an enzymatic biosensor for the hydrogen peroxidedetection. (IPICS ANEC, Local)

**Uganda**

Michael Kiraye (M). Bioremediation of Water Contaminated with Crude Oil Petroleum Hydrocarbons Using Pseudomonas aeruginosa –A Case of Lake Albert. (IPICS UGA:01, Local)

Fabious K. Ambama (M). Sorption and Degradation of Atrazine in Soils from Sugar Cane and Oil Palm Cultivating Regions of Uganda. (IPICS UGA:01, Local)

Dennis Wokiyi (M). Non-linear Inverse Geothermal Problems. (Lic). (IPMS EAUMP, Sandw.)

Jean Damascene Mbarabucyeye (M). Identification of Potential Blazar Candidates among Fermi-LAT Unidentified sources. (IPPS EAARN, Local)

Beatrice Nserengiyumva (F). Properties of Green Valley Galaxies in the Local Universe. (IPPS EAARN, Local)

Nelson Ndugu (M). Influence of stellar cluster on planet formation. (IPPS UGA:02, Local)

Daphine Ayebare (F). Determination of trends of ionospheric irregularities over African low latitude region during storms conditions. (IPPS UGA:02, Local)
Otto Trust (M). Age of single Rotating stars in the Kepler open cluster NGC 6811.  
(IPPS UGA:02, Local)

Eliazah Andama (M). Investigation of the effect of Equatorial Electroject on Scintillation occurrence over the East African Region.  
(IPPS UGA:02, Local)

Zambia

Hanzooma Hatwiko (M). Design and evaluation of the sensing characteristics of polyaniline-biotinylated Pseudomonas aeruginosa biosensor.  
(IPICS ZAM:01, Local)

Abigail Mbozi (F). Polyaniline nanoparticles for detection of aldrin.  
(IPICS ZAM:01, Local)

Musonda, J. (M). Orthogonal Polynomials, Operators and Commutation Relations. (Lic.)  
(IPMS EAUMP, Sandw.)

(IPMS EAUMP, Local)

Zimbabwe

Simbarashe Sithole (M). Isolation, purification and characterisation of phytochemicals from Dolichos kilimandashacharicus.  
(IPICS ZIM:01, Local)

Tatenda Matete (M). Geotechnical assessment of Mtshingwe block at Mimosa mine by Geophysical and Geological data integration.  
(IPPS ZIM:01, Local)

(IPPS ZIM:01, Local)
APPENDIX 2 PUBLICATIONS

In 2017, 46% of the 310 articles in scientific journals (Table 5, Table 19) were in journals listed on Web of Science, with Thomson Reuter impact factors (and with or without NRCD ranking). Another 8% were in journals listed only in the Norwegian Register for Scientific Journals, Series and Publishers, indicating that, in all, 54% of the journal articles were in quality journals. In addition, 42 publications reported were book chapters, popular publications, etc. ISP support was acknowledged in 27% of the reported journal articles.

Table 19. Summary of publication data for 2017, per category and program. The number (No) of publications (Publ.) in scientific journals is specified to those with and without Thomson Reuters (TR) impact factors (IF) or NCDR ranking, and in which cases ISP funding was acknowledged (Y) or not (N).

<table>
<thead>
<tr>
<th>Publication category</th>
<th>IPICS</th>
<th>IPMS</th>
<th>IPPS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
</tr>
<tr>
<td>Publ. in Scientific Quality J. (TR or TR+NRCD ranked)</td>
<td>27 / 50</td>
<td>1 / 30</td>
<td>12 / 21</td>
<td>40 / 101</td>
</tr>
<tr>
<td>Publ. in Scientific Quality Journals (NCRD ranked only)</td>
<td>4 / 8</td>
<td>2 / 10</td>
<td>0 / 2</td>
<td>6 / 20</td>
</tr>
<tr>
<td>Publ. in Other Scientific Journals (unranked)</td>
<td>15 / 39</td>
<td>5 / 37</td>
<td>18 / 29</td>
<td>30 / 105</td>
</tr>
<tr>
<td>Books, Chapters, Popular Publ., Technical Reports, etc.</td>
<td>33</td>
<td>2 / 3</td>
<td>4</td>
<td>42</td>
</tr>
<tr>
<td>Total number of publications</td>
<td>176</td>
<td>90</td>
<td>86</td>
<td>352</td>
</tr>
</tbody>
</table>

Below, publications are detailed for each program, chemistry, mathematics and physics, and summarized in tables. The bibliographic data given is obtained directly from the reporting of the supported activities, with only minor editing. The code of the ISP-supported activity that is reporting the publication is given after each entry. All publications reported to ISP are listed, independent of whether the scientific work has been directly supported by ISP funding or not. In cases where the Digital Object Identifier (DOI) code is given, information can be accessed by adding the code to the web address http://dx.doi.org/. For publications in scientific journals (but not for other publications), green color marking of the code denotes that acknowledgement of ISP support is given in the paper.21

Furthermore, the ISSN code of the publication is given, and when applicable two codes, in cases when the printed and the electronic issues have different codes. In all cases, each publication reported to ISP is never intentionally listed twice in the annual reports; if the electronic article is listed; the listing is not repeated when the printed version is published.

Scientific Quality Journals and Other Journals

The publications are sorted by scientific journal, and where available the Thomson Reuters (TR) Impact Factor (IF) 2016 is given (with the 5-year Impact Factor within brackets).22 Journals listed with TR IF are here considered to be “scientific quality journals”.

From 2016, an additional quality measure is applied, comprising the ranking in the Norwegian Register for Scientific Journals, Series and Publishers, maintained by the Norwegian Centre for Research Data (NCRD). Where available, the rank is given in brackets, between the journal name and any TR IF.

21 Directly or indirectly, e.g. also by acknowledging the research group or scientific network that is supported by ISP.
The Norwegian scale stretches from 0–2, where journals ranked at 0 (sometimes indicated “-”) are not classified as a scientific publication venue, those ranked at 1 being a scientific publication venue, and those at 2 standing for an extra prestigious scientific publication venue.23

The data are based on search on journals’ ISSN. Where no rank is given, the ISSN was not recognized in the database. Journals ranked 1 or 2 are here considered to be “scientific quality journals”, while those ranked 0/- and those not listed as “other journals”. The rank 0/- implies that the journal has been considered by the Norwegian register team, and been disqualified, or has fallen in rank in relation to previous years.

In this report, articles in journals listed in Web of Science with TR IF or ranked at 1 or 2 in the Norwegian Register for Scientific Journals, Series and Publishers are regarded as published in scientific quality journals.

Chemistry Publications

IPICS partners reported 176 publications (Table 20). In the 143 articles in scientific journals, ISP was acknowledged in 35% of the 89 publications in all “quality journals”, and in 28% of the 54 publications in “other journals”. Totally 62% of the articles were in “quality journals”.

<table>
<thead>
<tr>
<th>Publication category</th>
<th>Publication data for Chemistry. (L.Am. = Latin America)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISP acknowledged (publ. in scientific journals only)</td>
<td></td>
</tr>
<tr>
<td>Publ. in Scientific Quality J. (TR or TR+NCRD ranked)</td>
<td>26 / 43</td>
</tr>
<tr>
<td>Publ. in Scientific Quality Journals (NCRD ranked only)</td>
<td>2 / 7</td>
</tr>
<tr>
<td>Publ. in Other Scientific Journals (unranked)</td>
<td>9 / 38</td>
</tr>
<tr>
<td>Books, Chapters, Popular Publ., Technical Reports, etc.</td>
<td>6</td>
</tr>
<tr>
<td>Total number of publications</td>
<td>131</td>
</tr>
</tbody>
</table>

Publications in Scientific Journals

Acta Pharmaceutica Sinica B
ISSN 2211-3835


Advanced Energy Materials
ISSN 1614-6832


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23 Norwegian Centre for Research Data; https://dbh.nsd.uib.no/publiseringskanaler/Forside


24 Latest Impact Factor, 2010

African Journal of Medical Biology


African Journal of Pharmacy and Pharmacology 0.839(0.875)²⁵
ISSN 1996-0816


Afrique Science
ISSN 1813-548X


American Scientific Research Journal for Engineering, Technology, and Sciences
ISSN (Print) 2313-4410, ISSN (Online) 2313-4402

H. Khamisa, K. Lusweti & H. Mwevura (2017). Quantification of heavy metals in breast milk samples sampled from Kilimani/Kidoti in Zanzibar. ASRJETS, 31(1)295-308. (IPICS ANCAP)


Analytica Chimica Acta (1) 4.950(4.849)
ISSN 0003-2670


Analytical and Bioanalytical Chemistry (1) 3.431(3.306)
ISSN 1618-2642


²⁵ Latest Impact Factor, 2011
Analytical Methods
ISSN 1759-9660


Applied Clay Science
ISSN 0169-1317


Asia Pacific Journal of Clinical Nutrition
ISSN 0964-7058 (Print); 1440-6047 (Online)

Tawanda Muzhingi, Kyung-Jin Yeum, Odilia Bermudez, Guangwen Tang & Andrew Hlanganiso Siwela (2017). Peanut butter increases the bioavailability and bioconversion of kale β-carotene to vitamin A. ASIA PAC J CLIN NUTR, 26(6)1039-1047. DOI: 10.6133/apjcn.112016.03 (IPICS ZIM:02)

Asian Journal of Pharmacognosy
ISSN 0128-1119


Asian Journal of Plant Science and Research
ISSN: 2249-7412


Biomedicine & Pharmacotherapy
ISSN 0753-3322


Biosensors and Bioelectronics
ISSN 0956-5663


Estudios Atacameños
ISSN: 0718-1043


Ethiopian Journal of Environmental Studies and Management
ISSN: 1998-0507

DOI: 10.4314/ejesm.v10i5.7

European Journal of Microbiology and Immunology
ISSN 2026-8633


European Journal of Pharmaceutical and Medical Research
ISSN 2394-3211


Food Science & Nutrition
ISSN 2048-7177


Indian Journal of Pharmaceutical and Biological Research
ISSN: 2320-9267


Industrial Crops and Products
ISSN 0926-6690


26 Not reported 2016
Innovative Food Science & Emerging Technologies (1) 2.473(3.458)
ISSN: 1466-8564

DOI: 10.1016/j.ifset.2017.05.004

International Journal of Advanced Research (-)
ISSN 2320-5407

DOI: 10.21474/IJAR01/4272 (IPICS RABiotech)

International Journal of Analytical Chemistry 0.901(1.172)
ISSN: 1687-8760 (Print); ISSN: 1687-8779 (Online)

DOI: 10.1155/2017/4676724 (IPICS ANCAP)

International Journal of Biological and Chemical Sciences ISSN 1997-342X (Online); 1991-8631 (Print)


International Journal of Biotechnology and Food Science ISSN 2384-7344


International Journal of Environmental Bioremediation & Biodegradation ISSN(Print): 2333-8628; (Online): 2333-8636


International Journal of Environmental Studies (1)
ISSN 0020-7233 (Print); 1029-0400 (Online)

(IPICS RWA:01)
International Journal of Multidisciplinary and Current Research
ISSN 2321-3124

International Journal of Nutrition and Food Sciences
ISSN: 2327-2694 (Print); ISSN: 2327 -2716 (Online)
DOI: 10.11648/j.ijnfs.20170603.16

DOI. 10.11648/j.ijnfs.20170603.11

International Journal of Photocatalysis
ISJN: 3276-7846
(IPICS KEN:01)

International Journal of Scientific Research in Science, Engineering and Technology
PRINT ISSN: 2395-1990; ONLINE ISSN: 2394 -4099


IOSR Journal of Applied Chemistry
ISSN 2278-5736 (Online)
Muraga JM, Wandiga SO, & Abong'o DA (2017). Assessment of Dissolved Ions and Microbial Coliform in Water from Selected Sites of the Upper Athi River Sub-Catchment Area, Kenya. IOSR-JAC, 10(5-II)101-109. (IPICS KEN:01)

**IOSR Journal of Pharmacy**
ISSN 2319-4219 (Print); 2250-3013 (Online)


**Iranian Journal of Analytical Chemistry**
Print ISSN 2383-2207; Online ISSN 2538-5054


**Journal of Applied Sciences and Environmental Management**
ISSN: 1119-8362 (1)


**Journal de la Société Ouest-Africaine de Chimie**
ISSN 0796-6687


**Journal of Applied Biology & Biotechnology**
ISSN Print: 2455-7005; Online: 2347-212X


**Journal of Applied Biosciences**
ISSN 1997–5902


**Journal of Bangladesh Chemical Society**
ISSN 1022-016X (Print); 2408-8692 (Online)

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[^27]: Not reported 2016.

**Journal of Biologically Active Products from Nature**
ISSN 2231-1866 (Print); 2231-1874 (Online)


DOI: 10.1080/22311866.2017.1342561 (IPICS ZIM:01)


**Journal of Clinical Microbiology**
ISSN: 0095-1137 (Print); 1098-660X (Online)


**Journal of Complementary and Integrative Medicine**
ISSN 1553-3840


**Journal of Electroanalytical Chemistry**
ISSN 0022-0728


**Journal of Environmental Protection**
ISSN 2152-2197 (Print); 2152-2219 (Online)


111


Magallania
ISSN: 0718-2244


Marine Biology
ISSN: 0025-3162 (Print) 1432-1793 (Online)


Marine Pollution Bulletin
ISSN: 0025-326X


Materials Sciences and Applications
ISSN Online: 2153-1188; ISSN Print 2153-117X


Microchimica Acta
ISSN 0026-3672

Molecules (1) 2.861(2.988)
ISSN 1420-3049


Natural Products: An Indian Journal
ISSN 0974-7508


Natural Product Research (1) 1.828(1.534)
ISSN 1478-6419 (Print); 1478-6427 (Online)


The Natural Products Journal
ISSN 2210-3155

Nutrition Journal  
ISSN 1475-2891  
(1)  3.211(3.589)  
(IPICS RABiotech)

Phytochemistry Letters  
ISSN 1874-3900  
(1)  1.418(1.493)  
(IPICS KEN:01)  
DOI: 10.1016/j.phytol.2017.07.012

Pedosphere  
ISSN: 1002-0160  
(1)  1.734(2.053)  
(IPICS ANCAP)

PLOS Medicine  
ISSN 1549-1277  
(2)  11.852(14.952)  
(IPICS ZIM:AiBST)

Process Safety and Environmental Protection  
ISSN: 0957-5820  
(1)  2.905(3.119)  
(IPICS ANEC)

Regional Studies in Marine Science  
ISSN 2352-4855  
(1)  1  
(IPICS CAB:01)
Renewable Energy
ISSN 0960-1481


Researcher
ISSN 1553-9865 (print); 2163-8950 (online).


Revue des Sciences de l’Eau
ISSN: 0992-7158, 1718-8598


RSC Advances
ISSN 2046-2069


Science in China Series B: Chemistry
ISSN: 1674-7291 (Print), 1869-1870 (Online)


Science of the Total Environment
ISSN 0048-9697


28 Not reported 2016.

Scientific Study and Research; Chemistry & Chemical Engineering, Biotechnology, Food Industry
ISSN 1582-540X


Sensors and Actuators, B: Chemical (1) 5.401(4855)
ISSN: 0925-4005


Separation and Purification Technology (1) 3.359(3.843)
ISSN 1383-5866


South African Journal of Botany (1) 1.427(1.491)
ISSN 0254-6299


South African Journal of Chemistry (1) 0.653(0.650)
ISSN 0379-4350


Books, Book Chapters, Popular Publications, Technical Reports, etc.

Nilufar Nahar (2017). Six monthly project report on HEQEP to UGC. (IPICS BAN:04)


BUT CHANVEASNA. The Study about Process and Quality of Wort for Producing Beer at Khmer Beverages Limited. Poster on permanent display at RUPP. (IPICS CAB:01)

CHEA PISEY. The Study of Nitrate Pollution in Groundwater in Vicinity of Municipal Solid Waste Landfill. Poster on permanent display at RUPP. (IPICS CAB:01)

CHEANG LITA. Identifying the Presence and Quantity of Bacteria E. coli and Total coliform in Water in Trapang Songke, Kampong Speu and Along the Rails of Phnom Penh, Cambodia. Poster on permanent display at RUPP. (IPICS CAB:01)

CHUN SREYPOV. Determination of Total coliform and Escherichia coli bacteria in drinking water, Sangke Bangve Village, Kampot Province. Poster on permanent display at RUPP. (IPICS CAB:01)

HENG RATHA. Extraction of Polyphenol Oxidase from Young Palmyra Palm (Borassus flabellifer L.) Fruit Mesocarp in Trapang Sangke Village, Kampong Speu Province. Poster on permanent display at RUPP. (IPICS CAB:01)

HUN SARUON. Degradation of Methylene blue in the water by using Photo-catalyst of Zinc oxide nanowire. Poster on permanent display at RUPP. (IPICS CAB:01)

HOANMAB. Potentiometric Glucose Biosensor based on Zinc Oxide Nanowires. Poster on permanent display at RUPP. (IPICS CAB:01)

LAY PANHARY. Determination of Phosphorus (P) in rice soil at Takeo province in Cambodia. Poster on permanent display at RUPP. (IPICS CAB:01)

LEANG THEARY. Determination of Benzoic Acid in Chilli Sauce and Tomato Sauce. Poster on permanent display at RUPP. (IPICS CAB:01)
PONG VATHANA. Identification and Quantitative analysis of Formaldehyde in chicken and quail at Phnom Penh city in Cambodia. Poster on permanent display at RUPP. (IPICS CAB:01)

SATH SELADAVIT. Determination of Metal levels (Cd, Cu, Fe, Pb and Zn) in surface water of Tonle Sap Lake, The Tropical Riverine System, Cambodia. Poster on permanent display at RUPP. (IPICS CAB:01)

SEANG THONGMY. Determination of Nitrite Ion in Beef. Poster on permanent display at RUPP. (IPICS CAB:01)

SOUN NIMOL. Determination of Phosphorus in Red Soil at Mondolkiri province by using UVVis spectrophotometer. Poster on permanent display at RUPP. (IPICS CAB:01)

THOEM DALY. Qualitative and Quantitative study of Inorganic Arsenic in bottled drinking water in some provinces in Cambodia by Atomic Fluorescence Spectrometry. Poster on permanent display at RUPP. (IPICS CAB:01)

THOL RAKSMEY. Determination of Inorganic Arsenic in Well Water in Three Provinces at Kompong Speu, Prey Veng and Kompong Thom in Cambodia. Poster on permanent display at RUPP. (IPICS CAB:01)

UM DALIN. Determination and Study of Heating effects on Vitamin C in Vegetables. Poster on permanent display at RUPP. (IPICS CAB:01)

YAN SREILEAP. Determination of Metal levels (Cd, Cu, Fe, Pb and Zn) in Surface Water of Mekong River, Cambodia. Poster on permanent display at RUPP. (IPICS CAB:01)

YI DARIN. Determination of Quantitative Beta-Carotene in Vegetables from three Markets in Phnom Penh. Poster on permanent display at RUPP. (IPICS CAB:01)


Mathematics Publications

IPMS partners reported 90 publications (Table 21). In the 85 articles in scientific journals, ISP was acknowledged in 7% of the 43 publications in all "quality journals", and in 12% of the 42 publications in "other journals". Totally 51% of the articles were in "quality journals".

Table 21. Summary by region of publication data for Mathematics

<table>
<thead>
<tr>
<th>Publication category</th>
<th>Africa</th>
<th>Asia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISP acknowledged (publ. in scientific journals only)</td>
<td>yes / no</td>
<td>yes / no</td>
<td>yes / no</td>
</tr>
<tr>
<td>Publ. in Scientific Journals (TR or TR+ NCRD ranked)</td>
<td>1 / 28</td>
<td>0 / 2</td>
<td>1 / 30</td>
</tr>
<tr>
<td>Publ. in Scientific Quality Journals (NCRD ranked only)</td>
<td>2 / 10</td>
<td>0 / 0</td>
<td>2 / 10</td>
</tr>
<tr>
<td>Publ. in Scientific Journals (&quot;unranked&quot;)</td>
<td>5 / 36</td>
<td>0 / 1</td>
<td>5 / 37</td>
</tr>
<tr>
<td>Books, Chapters, Popular Publ., Technical Reports, etc.</td>
<td>2 / 3</td>
<td>0</td>
<td>2 / 3</td>
</tr>
<tr>
<td>Total number of publications</td>
<td>87</td>
<td>3</td>
<td>90</td>
</tr>
</tbody>
</table>

Publications in Scientific Journals

Advances and Applications in Statistics

ISSN: 0972-3617


Advances in Difference Equations

ISSN: 1687-1847 (Online)


Advances in Fixed Point Theory

ISSN: 1927-6303


Afrika Statistika

ISSN: 2316-090X

African Diaspora Journal of Mathematics
ISSN 1539-854X


(IPMS BURK:01)

African Evaluation Journal

ISSN: (Online) 2306-5133, (Print) 2310-4988


(IPMS EAUMP)

Anatomy Journal of Africa

ISSN: 2305-9478


(IPMS EAUMP)

Annales Mathématiques Africains

ISSN 2218-4414


(IPMS BURK:01)29

Annals of the University of Craiova, Mathematics and Computer Science Series

ISSN 1223-6934


(IPMS BURK:01)


(IPMS BURK:01)

Applied General Topology

ISSN: 1989-4147 (Online)


(IPMS EAUMP)

Applied Mathematical Sciences

ISSN: 1312-885X (Print), 1314-7552 (Online)


(IPMS EAUMP)

29 Not reported 2016.

Asian Journal of Mathematics and Applications
ISSN: 2307-7743


Asian Journal of Mathematics and Computer Research
ISSN: 2395-4205 (Print), 2395-4213 (Online)


Automatica
ISSN: 0005-1098


Balkan Journal of Geometry and Its Applications
ISSN: 1224-2780 (Print), 1843-2875 (Online)


Bulletin of the Korean Mathematical Society
ISSN: 1015-8634 (Print), 2234-3016 (Online)

Sony Chan & Kyung Soo Rim. A weighted Fourier series with signed good kernels. B KOREAN MATH SOC, 54(3)935–952. DOI: 10.4134/BKMS.b160365

Communications in Algebra
ISSN: 0092-7872 (Print) 1532-4125 (Online)

Nega Arega & John van den Berg (2017). Two-sided residuation in the set of topologizing filters on a ring. COMMUN ALGEBRA, 45(3)992–1011. DOI: 10.1080/00927872.2016.1172624

Communications in Mathematical Biology and Neuroscience
ISSN 2052-2541


Comptes Rendus Mathematique
ISSN: 1631-073X


East Asian mathematical journal
ISSN: 1226-6973 (Print), 2287-2833 (Online)


Electronic Journal of Differential Equations
ISSN 1072-6691


ESAIM: Mathematical Modelling and Numerical Analysis
ISSN: 0764-583X


European Journal of Control
ISSN: 0947-3580


Mujahid Abbas, Bahru Tsegaye Leyew & Safeer Hussain Khan (2017). A New $\varphi$-Generalized Quasi Metric Space with Some Fixed Point Results and Applications. FILOMAT, 31(11)3157-3172. DOI: 10.2298/FIL1711157A (IPMS ETH:01)


**International Journal of Mathematics and Computation**
ISSN: 0974-570X (Online), 0974-5718 (Print) (1)


**International Journal of Mathematics and Physical Sciences Research**
ISSN: 2348-5736 (Online)


**International Journal of Scientific & Engineering Research**
ISSN 2229-5518


**International Journal of Scientific Engineering and Technology**
ISSN 2277-1581


**International Journal of Statistical Distributions and Applications**
ISSN: 2472-3487 (Print), 2472-3509 (Online)


**Jñānābha**
ISSN 0304-9892 (Print), ISSN 2455-7463 (Online)


**Journal of Abstract and Computational Mathematics**
ISSN: 2149-7168 (Online)


Mathematics and Computer Science
ISSN: 2575-6036 (Print), 2575-6028 (Online)


Mathematics and Computers in Simulation
ISSN: 0378-4754


Minimax Theory and its Applications
ISSN (Print): 2199-1413, (Online): 2199-1421


Nonlinear Analysis Forum
ISSN: 1226-7228


Pacific Journal of Optimization
ISSN 1348-9151 (PRINT); 1349-8169 (ONLINE)


Pioneer Journal of Mathematics and Mathematical Sciences
ISSN: 2230-9829


PLoS ONE
ISSN 1932-6203 (Online)


Researchjournali's Journal of Mathematics
ISSN 2349-5375

Statistics and Probability Letters
ISSN 0167-7152

University Politehnica of Bucharest Scientific Bulletin-Series A-Applied Mathematics and Physics
ISSN 1223-7027 (Print), 2286-3672 (online)

Books, Book Chapters, Popular Publications, Technical Reports, etc


Physics Publications

IPPS partners reported 86 publications (Table 22). In the 82 articles in scientific journals, ISP was acknowledged in 34% of the 35 publications in all "quality journals", and in 38% of the 47 publications in "other journals". Totally 43% of the articles were in "quality journals".

Table 22. Summary by region of publication data for Physics. (L.Am. = Latin America)

<table>
<thead>
<tr>
<th>Publication category</th>
<th>Africa</th>
<th>Asia</th>
<th>L.Am.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISP acknowledged (publ. in scientific journals only)</td>
<td>yes / no</td>
<td>yes / no</td>
<td>yes / no</td>
<td>yes / no</td>
</tr>
<tr>
<td>Publ. in Scientif. Quality J. (TR or TR+ NCRD ranked)</td>
<td>8/13</td>
<td>3/7</td>
<td>1/1</td>
<td>12/21</td>
</tr>
<tr>
<td>Publ. in Scientific Quality Journals (NCRD ranked only)</td>
<td>0/1</td>
<td>0/1</td>
<td>0/0</td>
<td>0/2</td>
</tr>
<tr>
<td>Publ. in Scientific Journals (&quot;unranked&quot;)</td>
<td>17/20</td>
<td>1/9</td>
<td>0/0</td>
<td>18/29</td>
</tr>
<tr>
<td>Books, Chapters, Popular Publ., Technical Reports, etc.</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total number of publications</td>
<td>60</td>
<td>24</td>
<td>2</td>
<td>86</td>
</tr>
</tbody>
</table>

Publications in Scientific Journals

ACS Omega
ISSN 2470-1343


Advanced Powder Technology
ISSN 0921-8831

Advances in Materials
ISSN 2327-2503 (Print), 2327-252X (Online)


Advances in Science and Technology Research Journal
ISSN 2299-8624


Advances in Space Research
ISSN 0273-1177


Advances in Materials Physics and Chemistry
ISSN: 2162-531X (Print), 2162-5328 (Online)

P.C. Karmaker, M.O. Rahman, N. H. Dan, S. I. Liba, P. Nordblad, D.K. Saha & S.M. Hoque (2017). Thermal Behavior and Magnetic Properties of Nd-Fe-B Based Exchange Spring Nanocomposites Nd_{4-x}Tb_xFe_{83.5}Co_{5}Cu_{0.5}Nb_{0.5}B_{6} (x = 0, 0.2, 0.4, 0.6, 0.8 and 1) Melt-Spun Ribbons. Adv. Mat. Phys. Chem. 7(6) Article ID:76829 (19 pp.). DOI: 10.4236/ampc.2017.76018 (IPPS BAN:02)

Afrique Science
ISSN 1813-548X


AIP Advances
ISSN 2158-3226 (Online)


**American Journal of Innovative Research and Applied Sciences**
ISSN 2429-5396 (Online)


**Analytical and Bioanalytical Chemistry**
ISSN 1618-2642 (Print), 1618-2650 (Online)


**Applied Optics**
ISSN 1559-128X


**Applied Radiation and Isotopes**
ISSN 0969-8043


**Arabian Journal of Earth Sciences**
ISSN 2409-4730 (Online)


DOI: www.asrongo.org/doi:2.2017.4.2.50
136

Asian Journal of Physical and Chemical Sciences
ISSN 2456-7779


Bangladesh Journal of Physics
ISSN 1727-6179


Bulletin of the Seismological Society of America (1) 2.146(2.469)
ISSN 0037-1106

Climatic Change (1) 3.496(4.907)
ISSN 0165-0009 (Print), 1573 -1480 (Online)

Contrast Media & Molecular Imaging (1) 3.307(2.760)
ISSN 1555-4309 (Print), 1555 -4317 (Online)

Earth and Planetary Science Letters (2) 4.409(4.966)
ISSN 0012-821X
Energy and Power Engineering
ISSN 1949-243X (Print), 1947-3818 (Online)

DOI: 10.4236/epe.2017.98028

Energy Procedia
ISSN 1876-6102

DOI: 10.1016/j.egypro.2017.08.072 (IPPS AFSIN)
(IPPS KEN:04)

Global Journal of Pure and Applied Sciences
ISSN 1118-0579


Hydrology and Earth System Sciences
ISSN 1027-5606 (Print), 1607-7938 (Online)


International Advanced Research Journal in Science, Engineering and Technology
ISSN 2394-1588 (Print), 2393-8021 (Online)


International Journal of Advanced Engineering Research and Science
ISSN 2349-6495 (Print), 2456-1908 (Online)


International Journal of Engineering and Advanced Technology
ISSN 2249-8958 (-)

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<td>estimation of COD, BOD5 and Fe2+ in Niger river water at Bamako. Int.</td>
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<td>Dianda &amp; Dieudonné Joseph Bathiébo (2017). Numerical study of the</td>
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<td>using Arduino Uno R3 Microcontroller Board. Int. J. Sci. Technoledge,</td>
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138


M.K.H. Bhuiyan, M.A. Gafur, M.N.I. Khan, A.A. Momin & A.K.M. Akther Hossain (2017). Correlations of Structural, Dielectric, Magnetic and Magnetoelectric Properties of Ca_{1-x}Sr_x(Fe_{0.5}Ta_{0.5})O_3 Multi Ferroic Ceramics. Mat. Sci. Appl., 8(1), Article ID 73386 (21 pp.)


Antoine Mahoro, Mirjana Pović & Pheneas Nkundabakura (2017). Star formation of far---IR AGN and non---AGN galaxies in the green valley: possible implication of AGN positive feedback. MON NOT R ASTRON SOC, 471(3)3226-3233. DOI: 10.1093/mnras/stx1762


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ISSN 2164-5388 (Print), 2164-5396 (Online)

DOI: 10.4236/ojbiphy.2017.72005

DOI: 10.4236/ojbiphy.2017.73011 (IPPS AFSIN)

**Optik**  
ISSN 0030-4026


**PLOS One**  
ISSN 1932-6203 (Online)

DOI: 10.1371/journal.pone.0185130 (IPPS AFSIN)  
(IPPS KEN:02)

**Physical Review C**  
ISSN 2469-9985

Nyein Wint Lwin, No No Htike & K. Hagino (2017). Applicability of the Wong formula for fusion cross sections from light to heavy systems. PHYS REV C, 95:064601, 1–4. (IPPS MYA:01)  
DOI: 10.1103/PhysRevC.95.064601

**Physical Science International Journal**  
ISSN 2348-0130

DOI: 10.9734/PSIJ/2017/37156
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**Radiation Protection and Environment**

ISSN 0972-0464 (Print), 2250-0995 (Online)


**Smart Grid and Renewable Energy**

ISSN 2151-481X, (Print) 2151-4844 (Online)


**Spectral Analysis Reviews**

ISSN 2331-2092 (Print), ISSN 2331-2106 (Online)


**Tectonics**

ISSN 0278-7407


**Turkish Journal of Physics**

ISSN 1300-0101 (Print), 1303-6122 (Online)


Water Science and Technology - Water Supply (1) 0.573(0.663)
ISSN 1606-9749


Books, Book Chapters, Popular Publications, Technical Reports, etc


K.S. Rabbani continued to publish “Electronics Pathsala” (Electronics School, in Bangla), a serial article on electronics school, in Biggan Chinta, a monthly magazine on popular science by Prothom Alo, the leading Bangla Daily in Bangladesh, since Nov. 2016.


APPENDIX 3. CONTRIBUTIONS TO CONFERENCES, WORKSHOPS AND MEETINGS

Meetings are listed chronologically for each country, and contributions listed according to ISP group/network code, whether oral or poster, and then by author.

International

Table 23. Number of poster (P) and oral (O) contributions to international scientific meetings in the listed countries, by scientists in ISP-supported groups and networks

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Austria

*International Conference on Applications of Radiation Science and Technology, 24-28 Apr., Vienna*


(IPPS KEN:01/2)


(IPPS KEN:01/2)

*International Nuclear Security Education Network (INSEN) Annual Meeting, 24-28 July, Vienna*

Angeyo. K.H. New Master Programme and New Supporting Research Line in Nuclear Forensics in Kenya. (O)

(IPPS KEN:01/2)

Computer Algebra in Combinatorics, Erwin Schroedinger Institut, 13-17 Nov., Vienna

Samuel Asefa Fufa. On Exponential Pointed Structures and Its variations. (O) (IPMS ETH:01)

Bangladesh


M Abdul Kadir, Adrian J. Wilson & K Siddique-e Rabbani. Instrumentation for Multi-Frequency Focused Impedance Measurements. (O)

(IPPS BAN:04)


(IPPS BAN:04)

Prokash Saha & M Abdul Kadir. Electric wheelchair control by eye movements: an image processing approach. (O)

(IPPS BAN:04)

Sajib Sen & K S Rabbani. Instrumentation for Detecting Cervical Cancer Using Electrical Impedance Method. (O)

(IPPS BAN:04)

M M Alam, K S Rabbani, Mechanical Improvement of MUAC Device and its Implementation for Malnutrition Detection. (O)

(IPPS BAN:04)


(IPPS BAN:04)

M Ohiduzzaman, R Khatun, S Reza, M Abdul Kadir, S Hossain, M M Ahasan, S Akter, M F Uddin & A N Monika. Thyroid Uptake of 99m-Tc and its agreement with 131-I for evaluation of thyroid function at INMAS, Dhaka, BAEC. (O)

(IPPS BAN:04)

K Siddique-e Rabbani. Education, Certification and Accreditation in Medical Physics. (O, inv.)

(IPPS BAN:04)

3rd International Conference on Electrical Information and Communication Technology (EICT), 7-9 Dec., Khulna

R. Z. Rusho & M Abdul Kadir. Reconstruction algorithm for Pigeon Hole Imaging (PHI). (O)

(IPPS BAN:04)
5th IEEE Region 10 (Asia Pacific) Humanitarian Technology Conference (R10HTC), 21-23 Dec., Dhaka


20th International Conference on Computer and Information Technology, 22-24 Dec., Dhaka


Botswana

9th International Conference of the Africa Material Research Society (AMRS), 1-14 Dec. Gaborone

Cecelia China. Stabilization of collagen using alum from Tanzanian local clay. (O) (IPICS SEANAC)

Itisha Chummun. Polysucrose based scaffolds for tissue engineering applications. (O) (IPICS SEANAC)

Abera Demeke. Electrochemical sensor for determination of pyridine-2-aldoxime methochloride and dopamine at poly(3,4-ethylenedioxythiophene) modified glassy carbon electrode. (O) (IPICS SEANAC)

Tatenda Madzokere. Adsorptive recovery of auro-dicyanide anions from aqueous solutions using activated Carbon-Magnesium Oxide (C-MgO) nanocomposite as adsorbent. (O) (IPICS SEANAC)

John Ndungu Mmbaga. Design and fabrication of polymer layered silicate nanocomposites for water purification. (O) (IPICS SEANAC)

Mamello Mohale. Developing fret assays to study the binding of fibroblast growth factor to its receptor. (O) (IPICS SEANAC)

Kenny Shumba. Core-shell thin film nanoparticles. (O) (IPICS SEANAC)

Agatha Wagutu. Crustacean derived biocomposite for decontamination of drinking water in Northern Tanzania. (O) (IPICS SEANAC)

Michelle Nyoni. Investigation of lithium vanadium phosphates as a cathode material for lithium-ion batteries. (P) (IPICS SEANAC)

Noor Jehan Gulumussen. Studies for Use of Reclaimed Water for Construction Industry in Maputo, Mozambique. (P) (IPICS SEANAC)

Paidamoyo Musere. Application of green synthesized silver nanoparticles: An environmentally benevolent approach in waste water treatment and catalytic activity of benzyl alcohol oxidation with hydrogen peroxide. (P) (IPICS SEANAC)

K Shumba and M O MuMunyati, High sensitivity sensor for detection of formaldehyde based polyaniline-nickel oxide core-shell nanoparticle thin films. (O) (IPICS ZAM:01)
Burkina Faso

Colloque International sur la sécurité alimentaire en Afrique (CIS2A), 8-10 Nov., Ouagadougou

Y. Dabire & A.S. Traore. Activités antibactériennes et antifongiques des molécules bioactives produites par des souches de Bacillus isolées du Soumbala. (O) (IPICS RABiotec)

I. Keita & A.S. Traore. Etude de la biodiversité des levures impliquées dans la production de la bière de sorgho "dolo" au Burkina Faso. (O) (IPICS RABiotec)

I. Mogmenga, M.K. Soroma, I. Keita, A. Savadogo & A.S. Traore. Etude comparative de la bioconversion de la mélasses de la mélasses de canne à sucre en protéines d'organismes unicellulaires par trois souches de levure: Saccharomyces cerevisiae, Candida utilis et Rhodotorula musilaginosa. (O) (IPICS RABiotec)


Canada

2nd Research Coordination Meeting of the Coordinated Research Project on Geochemical and Mineralogical Characterization of Uranium and Thorium Deposits, 30 May-2 Jun., Ontario


China

IRCK International Training Course on Karst Hydrogeology, Environmental Geology and Ecological Geology, 16-30 Jul., Kunming

Chuma C, Overview of karst in Zimbabwe: A case study of Chinhoyi Caves and other potential sites. (O) (IPPS ZAM:01)

Czech Republic

Topology, Algebra, and Categories in Logic 2017, 26-30 June, Prague

Nega Arega Cherie. Topologizing filters on rings of fractions RS^1 and congruence relation on FilR. (O) (IPMS ETH:01)

France

Scientific Foresight days AMMA-CATCH 3-5 May, Sète

A. Ba. Research activities at the LOSSA: Soil/Agriculture/Climate. (O) (IPPS MAL:01)

Souleymane Sanogo & Abdramane Ba. Stochastic modeling of feedbacks of surface conditions on precipitation in the Sahel. (O) (IPPS MAL:01)

Bakamba dite Djénéba Sacko, Souleymane Sanogo, Hamidou Konaré & Abdramane Ba. Application of VIS-NIR reflectance spectroscopy to soil analysis. (P) (IPPS MAL:01)
Traoré B.S., Sanogo S. & Ba A. Relationship between air temperature and soil moisture. (P) (IPPS MAL:01)

**Germany**

*Kick-off workshop of Project RARSUS, 26-31 Mar., Köln*

Abdramane Ba. Introduction to USTT-B. (O) (IPPS MAL:01)

*Astroparticle school, 4-12 Oct., Obertrubach-Bärnfels*

J.D. Mbarubucyeye. Identification of potential brazar candidates among Fermi LAT unidentified sources. (O) (IPPS RWA:01) (IPPS EAARN)

**India**

*Second International Conference on Material Science (ICMS-2017), 16-18 Feb., Tripura*


M.J. Miah, M.N.I. Khan F.A. Khan, A.K.M. Akther Hossain. Relaxor behavior of multiferroic Ba0.95Sr0.05TiO3-(1-x)BiFe0.9Re0.1O3 ceramics. (P) (IPPS BAN:02)

*24th Congress and General Assembly of the International Union of Crystallography, 21-28 Aug., Hyderabad*

Md. Aminul Islam & F.A. Khan. Change of magnetic properties of (Fe1-xMnx)75P15C10 amorphous alloys ribbon. (P) (IPPS BAN:02)

*Non-Destructive Evaluation Conference and Exhibition, 14-16 Dec., Chennai*

M.J. Gatari. The role of Non-Destructive Testing (NDT) and entry challenges in development of a sustainable infrastructure in Kenya. (O, inv.) (IPPS KEN:01/2)

J. Birir, M. Gatari, P. Rajagopal & M. Mui. Improved Resolution in Guided Wave Testing. (P) (IPPS KEN:01/2)

W.M. Kairu, M.J. Gatari, P. Rajagopal & M.L. Muia. Development of an online health monitoring method of concrete in modified structures. (P) (IPPS KEN:01/2)

**Italy**

*9th Euro-Mediterranean Symposium on LIBS, 11-16 Jun., Pisa*

Angeyo K.H., Bhatt B., Dehayem-Massop A., Malaba J.N., Onkang J.N. & Wanyonyi B. Nuclear forensics utilizing machine learning enabled peak-free LIBS and LAMIS. (O) (IPPS KEN:04)


17th International Conference on Total Reflection X-ray Fluorescence Analysis and Related Methods, 19-22 Sep. 2017, Bescia

M.J. Gatari Gichuru, A.W. Mutahi & C.W. Gachara. TXRF in Identification of Pollutant Species Affecting Mt. Kenya Glaciers. (O) (IPPS KEN:01/2)


Japan

IASPEI, 30 July - 4 Aug., Kobe

Atalay Ayele. Recent seismicity and potential earthquake risk in major Ethiopian cities. (O) (IPPS ETH:02)

Laos

International Research Conference on Conservation and Development, 23 Nov., Luang Phrabang

Singsoupho, S., & Bhongsuwan, T. Natural radioactivity measurements and radiation dose assessment in Mesozoic sedimentary rock samples from central and southern Lao PDR. (O) (IPPS LAO:01)

Macedonia

7th International Symposium on IN SItu NUclear MEtrology as a tool for radioecology –INSINUEME 2017, 24-28 Apr., Ohrid

Kaniu, M.I., Darby I.G. & Angeyo K.H. In-Situ Gamma-Ray Spectrometric Assessment of the Radiation Anomaly Associated with Kenya’s South Coast Paved Road and Adjoining Environs. (O) (IPPS KEN:04)

Mali

Colloque Scientifique International de l’Université de Ségou, 14-16 Sep., Segou

I. Keita & A.S. Traore. Caractérisation moléculaire de levures pour la production de Protéines d’Organismes Unicellulaires à partir de la mélasse de canne à sucre. (O) (IPICS RABiotech)
Morocco

9th Pan African Congress of Mathematicians, 3-7 July, Rabat

Hamidou Toure. The Kneser Property in the alpha-norm for Nonlinear Differential Equations in Banach Space. (O) (IPMS BURK:01)

B. W. Ogana & J. Kagunda. Mathematics at the heart of technological innovation and economic development of Africa. (O) (IPMS EAUMP)

Mathématiques Appliquées à des questions de Développement (MADEV17), 16-19 Oct. Rabat

Abdou Sène, Gauthier Sallet. Les mathématiques appliquées et l'épidémiologie. (O) (IPMS BURK :01)


International Conference on Applied Mathematics, 19-20 Oct., Taza

Mamadou Abdoul Diop. Solvabilité des équations intégral-différentielles. (O) (IPMS BURK :01)

Myanmar

10th International Conference on Science and Mathematics Education in Developing Countries, 10-12 Nov., Mandalay

Ohn Mar. How to Interest Youth in Mathematics in Myanmar. (O) (IPMS SEAMaN)

Ei Hmue Khaing. A Brief History of Stone-Weierstrass Theorem. (O) (IPMS SEAMaN)

Sackmone Sirisack. Improving Laos’ Mathematicians through Scholarships, Training and Organizational Capacity Building. (O) (IPMS SEAMaN)

Phoui Souksomvang. Elliptic Gradient Constraint Problem. (O) (IPMS SEAMaN)

Bouasy Doungsavanh. Traffic Modelling and some Inequalities in Banach Spaces. (O) (IPMS SEAMaN)

Nepal

International Conference on Physics of Space and Materials (ICPSM-17), Sep., 2-3, Kathmandu

K Siddique-e Rabbani. Applying Physics to Life - development of healthcare technology for the common people, - in the light of Bangladesh experience. (O, inv.) (IPPS BAN:04)

Netherlands

Wetsus Congress, 9-10 Oct., Leeuwarden

N. Nyambane, M.J. Gatari, J.C.M. Marijnissen & L.L.F. Agostinho. Modeling the Relationship of Droplet Size and Packing Fraction on Droplet Evaporation. (P) (IPPS KEN:01/2)
Nigeria

9th International Toxicology Symposium in Africa, 7-8 Sep., Benin City

J.A.M. Mahugija. Levels of Formaldehyde and Acetaldehyde in Selected Bottled Drinking Water Sold in Urban Areas in Tanzania. (O) (IPICS ANCAP)

Portugal

2nd International Caparica Conference on Antibiotic Resistance, 12-15 Jun., Caparica Village

Stanley Mukangayama, Batanai Moyo, Santana Mapfunde, Tariro Chitemerere, Rumbidzai Mangoyi, Simbarashe Sithole, Tichaona Mtasa, Benjamin Bhunu, Ruvimbo Mautsa, Rumbidzai Nyamuriya, Gamuchirai Chinogwenya, Takudzwa Chidarura, Tafadzwa Nyambuya, Anesu Venge Bridget Mtisi, Lionel Gota, Brendna Lenda, Martha Sachikonye & Molly Mombeshora. Multifaceted Effects of Selected Phytochemicals on Selected Microbes: Possible Roles in Prevention and Reversal of Antimicrobial Drug Resistance. (O) (IPICS ZIM:01)

Singapore

8th International Conference on Chemical, Agricultural, Biological and Environmental Sciences, 10-11 Aug.

R. Zamir, A. Rahman, N. Islam & S. Rahman. Assessment of toxic heavy metals concentration in traditional herbal preparations commonly consumed by the people of Bangladesh. (O) (IPICS BAN:05)


Slovakia

Advanced Laboratory Skills OPCW Training Course, 6-16 Nov

M. Shoeb. Toxic Chemicals and their Managements in Bangladesh. (O) (IPICS BAN:04)

Mohammad Shoeb at the Advanced Laboratory Skills OPCW Training Course in Slovakia. Courtesy of IPICS BAN:04.
South Africa

*International Conference on Mathematical Method and Models in Biosciences and School for Young Scientists, 25-30 June, Kukuza Camp, Kruger Park*

Diène Ngom. Stability analysis of a compartmental SEIHRD model for the Ebola Virus Disease. (O) (IPMS BURK:01)

*29th International Texas Symposium on relativistic Astrophysics, 3-8 Dec., Cape Town*

Joseph Ntahompagaze, Amare Abebe & Manasse Mbonye. Equivalence between f(R) and Scalar- Tensor Theorie of Gravity. (O) (IPPS RWA:01)

J.D. Mbarubucyeye, P. Nkundabakura & F. Krauss. Search of potential high energy blazar candidate among fermi-LAT unidentified sources. (P) (IPPS RWA:01)

Manasse M. Mbonye. A simple model of space structure. (P) (IPPS RWA:01)

South Korea

*Korean Society for Industrial and Applied Mathematics, 23-24 June, Busan*

Veng Sotheara. A multi-scale Heston's stochastic volatility model with a stochastic interest rate. (O) (IPIMS SEAMaN)

*The International Society for Ecological Modelling Global Conference 2017, 17-21 Sep., Jeju Island*

Manalebish Debalike Asfaw. Co-Existence thresholds in the dynamics of the plant-herbivore interaction with Allee effect and harvest. (O) (IPMS ETH:01)

Sweden

*The 8th International Sustainability Transitions Conference, 18-21 Jun., Gothenburg*

L.K. Kiriinya, M.J. Gatari & Thomas Raiji. Ecosystem management and sustainable livelihoods: A case study of north eastern Mt. Kenya region, Meru, Kenya. (O) (IPPS KEN:01/2)

*11th International Society for Analysis, its Applications and Computation Conference (ISAAC), 14-18 Aug., Växjö*

Tsegaye Gedif Ayele. Theory and applications of boundary-domain integral and pseudodifferential Operators. (O) (IPMS ETH:01)

Hunduma Legesse Geleta. Dirichlet Power Series. (O) (IPMS ETH:01)

*China-Korea-Sweden trilateral OPV workshop, 21-22 Aug., Linköping*

W. Mammo. Our forays into the synthesis of conjugated polymers for photovoltaic applications: The experience from Ethiopia. (O) (IPICS ETH:01)
Switzerland

65th Congress of Society for Medicinal Plants and Natural Products Research, 3-5 Sep., Basel

Sami Khalid. Drug discovery approaches against Madurella mycetomatis - one of the most neglected tropical diseases (NTDs) (O) (IPICS NAPRECA)

A Mahmoud, P Mäser, M Kaiser, M Hamburger, S Khalid. Screening of Selected Sudanese Medicinal Plants for In vitro Activity Against Protozoal Neglected Tropical Diseases. (P) (IPICS NAPRECA)

WSIS Forum 2017: Open Consultation Process, Final review meeting on the Thematic Aspects and Innovations, 12-16 Jun., Geneva

K Siddique-e Rabbani. Experience of a telemedicine implementation effort in Bangladesh using indigenously developed technology and a rural entrepreneurship model. (O) (IPPS BAN:04)

Tanzania

3rd TCS International Conference and 6th FASC Congress, 11-15 Sept., Arusha

Mgina. C.A. Semisynthesis of mellein type isocoumarins using cashew nut shell liquid. (O) (IPICS ANCAP)

T. Muhizi, S. Grelier & V. Coma. Aminosugars, one of the candidates to find biodegradable biocides. (O) (IPICS RWA:01)

D. Umereweneza, T. Kamizikunze, T. Muhizi, Occurrence of mycotoxins in foodstuff consumed in Rwanda: Preservation against fungi using plant extracts. (O) (IPICS RWA:01)


10th WIOOMSA Scientific Symposium, 30 Oct. – 4 Nov., Dar es Salaam

A.J. Mmochi & K. Kombo, The influence of tidal levels or lunar cycles on the occurrence of natural hazards. (O) (IPICS ANCAP)

SAMSA conference, 20-23 Nov., Arusha

Mengistu Goa Sengago & Wondimu Wolde Kassu. Convergence of Ishikawa Iteration to Fixed Points of a Multi-valued Mapping in Modular Function Spaces. (O) (IPMS ETH:01)

H. Ddumba. A mathematical analysis of a predator-prey model with interspecific species' interference, predator additional food and dispersal. (O) (IPMS EAUMP)
J. Kasozi. Numerical ultimate ruin probabilities for an insurer who undertakes risk-free investments. (O) (IPMS EAUMP)

M. Kikonko. Some new results concerning general weighted regular Sturm-Liouville problems. (O) (IPMS EAUMP)

K. Muzundu. On poles of resolvents of dominated elements in ordered Banach algebras. (O) (IPMS EAUMP)

Froduald Minani. New Treatment of Weak solutions for the $\rho$-Laplace Equation. (O) (IPMS EAUMP)

J.N. Nakakawa. Banana Xanthomonas Wilt Infection: The Role of Debudding and Roguing as a Control Options within a Mixed Cultivar Plantation. (O) (IPMS EAUMP)

D. Ssevviiri. Nil, reduced and prime modules. (O) (IPMS EAUMP)

Thailand

*Pure and Applied Chemistry International Conference (PACCON-2017), 2-3 Feb., Bangkok*

Chan Oeurn Chey. Synthesis of ZnO nanowire by using rapid mixing hydrothermal method and its potential applications. (P) (IPPS CAM:01)

NGIN Putheary & Han Oksoo. Characterization of soybean lypoxygenese adsorbed on nanoporous rice husk silica. (O) (IPPS CAM:01)

Togo

*2ème Colloque Scientifique International “La recherche en Afrique: rétro-vision et vision pour l’émergence du continent”, 11-15 Sep., Kara*


Tunisia

*ANSOLE Days 2017, Solar Energy Materials and Applications, 5-8 May, Hammamet*

Jacinta Okwako, Alex Ogacho, Robinson Musembi, Francis Nyongesa & Bernard Aduda. Effect of Annealing on the Structural, Compositional and Optical Properties of CZTS thin films Deposited by SILAR Technique. (O) (IPPS KEN:02)

R.J. Musembi. Transport Mechanism in TiO$_2$/In(OH)$_3$SY/PbS Solar Cell. (P) (IPPS KEN:02)
**United Arab Emirates**


Sebastian Waita & Bernard Aduda. Structural and Optical Characterization of Polymer based TiO₂ films for Photovoltaic Applications. (P) (IPPS KEN:02)

**23rd International Diabetic Federation (IDF) Meeting, 4-8 Dec., Abu Dhabi**


B. Amrita, B. Rokeya & Y. Kabir. Association of SNP-KCNJ11 (E23K) gene with susceptibility to type 2 diabetes mellitus in Bangladeshi population. (P) (IPICS ANRAP)


B. Rokeya, M. Mosihuzzaman, M.S.H. Khan & L. Ali. Preliminary exploratory clinical trial with antidiabetic herbal medicine. (P) (IPICS ANRAP)

**United Kingdom**

*The 6th IUPAP International Conference on Women in Physics, 16-20 Jul., Birmingham*


Margaret Samiji. Outreach Activities: Physics Department University of Dar es Salaam, Tanzania. (O) (IPPS MSSEESA)

*Astronomy Conference TASC3/KASC10, 16–21 Jul., Birmingham*

E. Jurua & O. Trust. Classification of KIC 5025217 as a solar like oscillating δ Scuti star (P) (IPPS UGA:02)

*7th International Symposium on Energy, 13-17 Aug., Manchester*

S. Proum, S. Sath & S. Yan. Seasonal variation of metals (Cd, Cu, Fe, Pb and Zn) in surface water of tropical, riverine system, Cambodia. (O) (IPICS CAB:01)

*Extremal Combinatorics workshop 17-23 Sep., University of Warwick*

Samuel Asefa Fufa. On the Möbius Function of A Pointed Graded Lattice. (O) (IPMS ETH:01)
USA

NSF GeoPRISMS Rift Initiation and Evolution (RIE), 8-10 Feb., Albuquerque


Clinical Pharmacogenetics Implementation Consortium (CPIC®) Symposium at the ASCPT 2017 Annual Meeting, Mar. 15, Washington, DC

Collen Masimirembwa. Pharmacogenetics implementation: African perspectives with a focus on HIV and Efavirenz. (O) (IPICS ZIM:AfBST)

Kepler & K2 Science Conference IV, 19–23 Jun., Moffett Field

O. Trust & E. Jurua. Age of Single Rotating stars in NGC 6811 open cluster (P) (IPPS UGA:02)

Frontiers in Optics 2017, 18–21 Sep., Washington D.C.

Andrew Atiogbe Huzortey, Benjamin Anderson & Alfred Owusu. A Composite Algorithm for Optimized Baseline Correction in Raman Spectroscopy. (O) (IPPS AFSIN)

*The 62nd MMM Conference, 8 Nov., Pittsburgh*

Muthui Zipporah, Musembi Robinson, Mwabora Julius & Kashyap Arti. Perpendicular magnetic anisotropy in Mn₂VIn (001) films: An *ab initio* study. (O) (IPPS KEN:02)

**Zambia**

*International Workshop on Algebra and its Applications, 2-7 Apr. Livingstone*

Chileshe, C. On a conjecture Sylow p-groups of the symplectic group. (O) (IPMS EAUMP)

Chimpinde, T. When every irreducible character is a constituent of a primitive permutation character. (O) (IPMS EAUMP)

Haziyu, W. The orbit of affine action and momentum map with cocycle. (O) (IPMS EAUMP)

Ilwale, K. The fundamental group of the configuration space. (O) (IPMS EAUMP)

Kikonko, M. General weighted Sturm-Liouville problems. (O) (IPMS EAUMP)

Mbaale, X. One-sided group codes F5S4. (O) (IPMS EAUMP)

J. Ongaro. Combinatorics of Hurwitz Numbers. (O) (IPMS EAUMP)
# Regional

**Table 24.** Number of poster (P) and oral (O) contributions to regional scientific meetings in the listed countries, by scientists in ISP-supported groups and networks

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**Australia**

*17th Asian Chemical Congress, 23-28 Jul, Melbourne*

N. Nahar. Sulfur Drugs in Poultry and Beef Samples of Bangladesh. (O)  
(IPICS BAN:04)

M. Shoeb. Dissipation of Pesticides in Vegetable Samples for Consumer Safety. (O)  
(IPICS BAN:04)

M. Shoeb. Emerging Contaminants in Marine Environment of the Bay of Bengal. (O)  
(IPICS BAN:04)

M. Shoeb and N. Nahar, Natural Products for Drug Discovery in Bangladesh. (P)  
(IPICS BAN:04)
Bangladesh

Regional Public Health Conference, 29-30 Dec, BUHS, Dhaka

M.R. Ahmed. Analysis of harmful constituents in some antidiabetic herbal preparations (ADHPs) available in Bangladesh. (O) (IPICS ANRAP)

Botswana

The 9th International conference of the African materials research society, 11-14 Dec., Gaborone

Tibebe Birhanu. Stochastic resonance in a double well potential with non-homogeneous temperature of a semiconductor layer. (O) (IPPS ETH:01)

Yoseph Abebe. The effect of cold spots on two symmetric locations of quartic potential and the study of stochastic resonance in semiconductor layer. (P) (IPPS ETH:01)

Solomon Negash. Effect of polymer tacticity on the structure and glass transition temperature of supported polystyrene thin films. (P) (IPPS ETH:01)

Burkina Faso

First scientific days Doctoral School Sciences and Technologies. 25-28 Oct., Ouagadougou

Sacko D.B., Coulibaly N., Sanogo S. & Ba A. Application of spectroscopy (UV-VIS-NIR) Analysis of some chemical properties of soils and water in Mali. (O) (IPPS MAL:01)


Jeremie T. Zoueu. Computational Fourier Optics. (O) (IPPS AFSIN)


Marie Florence Yebouet. Time Multiplexing Super Resolution. (O) (IPPS AFSIN)


Karibe D.M. & Kaduki K.A., Introduction to 3D Modeling with OpenSCAD. (O) (IPPS KEN:04) (IPPS AFSIN)


Benjamin Anderson. Spectroscopy in Agriculture: Assessing Medicinal Plants and Food Quality. (O) (IPPS AFSIN)

Abdramane Ba. Interaction matter-radiation (Optical Spectroscopy/HYSPLIT model simulation. (O) (IPPS MAL:01)
Cambodia

*Workshop on Mathematical Modelling, Simulations and Optimization, 20-25 Nov., Dept. Math., RUPP, Phnom Penh*

Kedtysack Xaysanadasy. Some Ordinary Differential Equation Problems in Liquid Crystal Cells. (O) (IPMS SEAMaN)

Khankham Vongsavang. Burgers’ Equation and Some Applications. (O) (IPMS SEAMaN)

Cameroon

*ANSOLE Summer School on Sustainable Energetics, 30 July - 5 Aug., Yaounde and Buea*


*Journée de Chimie Analytique, 27-29 Sep., N’Gaoundéré*


J.B. Mabou Leuna, S.D. Kungo, A. Nassi & E. Ngameni. Étude de l’interaction électrochimique entre serum albumine bovin et polyphénoles (catechine et mameisin). (O) (IPICS ANEC)


B. B. Nguelo, G. Kenne Dedzo, I. Tonle Kenfack, C. Detellier, & E. Ngameni. Détectio

ampérométrique des traces d’ions thiocyanates sur une électrode de carbone vitréux modifiée par des nanohybrides kaolinite-liquides ioniques. (O) (IPICS ANEC)


O. Tchio Wamba, B.B. NdoukeuTchatat, M. Pengou, C.P. Nanseu-Njiki & E. Ngameni. Activité inhibitrice de la fraction hydroalcoolique des feuilles de ficus pimulalin. sur la corrosion de l’acier C38 en milieu HCl 1M. (O) (IPICS ANEC)


A.N. Megha, M. Pengou & C.P. Nanseu. Étude de l’inhibition de la corrosion de l’acier C38 en milieu HCl 1M par l’extrait d’alcaloïdes de *Rauvolfia macrophylla* Stapf. (O/P)(IPICS ANEC)


J.G.M. Yanke, G.D. Kenne & E. Ngameni. Influence du solvant sur le greffage d’un silane organophile à la surface d’une smectite: Elaboration de capteurs modifiés et application à la détection d’un pesticide. (P) (IPICS ANEC)

**Egypt**

*Conference of African Society of Human Genetics, 16-18 Nov., Cairo*

Collen Masimirembwa. Pharmacogenomics in Africa –finding our path from the lab bench to the patient bedside. (O) (IPICS ZIM:AiBST)

**Ethiopia**

*4th Middle East and African IAU Regional meeting (MEARIM IV), May 22-25, Addis Ababa*

Solomon Tessema. Millisecond X-ray pulsars. (O) (IPPS EAARN)

Gemechu Muleta. Star Formation Efficiency in Free Fall Time of Self-Gravitating Molecular Cloud. (O) (IPPS EAARN)

Isaac Habumugisha. Solitary structures beyond double layers in a 4-component dusty plasma. (O) (IPPS EAARN)

Ester Komucyeya. Determination of the membership of the Kepler Open Cluster NGC6819. (O) (IPPS EAARN) (IPPS UGA:02)

Solomon B. Tessema. Imperatives of Newly Emerging Astronomy and space Technologies for the Developing World. (O) (IPPS EAARN)

Bosco Oruru. Analysis of the High-energy Radiations from High-mass X-ray Binary IGR J17200-3116. (O) (IPPS EAARN)
Pheneas Nkundabakura. The Morphologies of Active and non-active Green Galaxies at z<=3. (O) (IPPS EAARN)

A. Mahoro, P. Nkundabakura & M. Povic, Star formation of far-IR AGN and non-AGN galaxies in the green valley: possible implication of AGN positive feedback. (O) (IPPS EAARN)

(IPPS RWA:01)

Edward Jurua. Use of Astronomy as a tool for Gender Balance in Tertiary Institutions. The Case of Mbarara University of Science and Technology. (P) (IPPS EAARN)

(IPPS UGA:02)

17th NAPRECA symposium, 12-16 Aug., Addis Ababa


Jacob O Midiwo, Aggrey Akimanya, Kerubo Omosa, Beth Ndunda, Boniface Muimi, Muhammad Ilias & Larry Walker. The Kenyan higher plants biodiversity, a source of anti-parasitic compounds for neglected tropical diseases. (O) (IPICS KEN:02)

Ndunda, Beth. The Phytochemistry and Biological Activity Investigations of Three Kenyan Croton Species. (O) (IPICS KEN:02)

Abiy Yenesew, Negera Abdissa, Milkyas Endale, Hoseah M. Akala and Máté Erdélyi. Phytochemical Investigation of Pentas Species (Rubiaceae) towards Management of Malaria. (O) (IPICS KEN:02)

Getahun Tadesse Gurmessa, I.B. Masessane, R.R.T. Majinda. Antioxidant and Antibacterial Properties of Compounds from the Stem Bark and Root Bark of Erythrina Brueci. (O)

Sami Khalid. The Nagoya protocol within the current African context. (O) (IPICS NAPRECA)

Daniel Umereweneza, Théoneste Kamizikunze, Théoneste Muhizi. Assessment of Mycotoxins Types in Some Foodstuff Consumed in Rwanda. (O) (IPICS RWA:01)

Molly Mombeshora and Stanley Mukanganyama. Evaluation of the antibacterial effects, nucleic acid leakage potential and haemolytic activity of Triumfetta welwitschii extracts on bacteria. (O) (IPICS ZIM:01)

Simbarashe Sithole & Stanley Mukanganyama. Determination of the cytotoxic effects of different leaf extracts and compounds isolated from Parinari curatellifolia (Chrysobalanaceae) and Combretum zeyheri (Combretaceae). (O) (IPICS ZIM:01)

Stanley Mukangayama, Batanai Moyo, Tariro Chitemerere, Rumbidzai Mangoyo, Simbarashe Sithole, Tichaona Mtasa, Benjamin Bhunu, Ruvimbo Mautsa, Rumbidzai Nyamurira, Gamuchirai Chinogwenya, Takudzwa Chidarura, Tafadzwa Nyambuya, Anesu Venge, Bridge Mtisi, Lionel Gota, Brendna Jenda, Martha Sachikonye & Molly Mombeshora. Natural products from plants as antimicrobials: possible roles in prevention and reversal of antimicrobial drug resistance. (O) (IPICS ZIM:01)

Winnie Mozirandi. Antibacterial activity and mode of action of Vernonia adoensis (Asteraceae) extracts against Staphylococcus aureus and Pseudomonas aeruginosa. (O) (IPICS ZIM:01)
Martha Induli, Michael Cheloti, Antonina Wasuna, Ingrid Wekesa, John Wanjohi, Robert Byamukama, Matthias Heydenreich, Moses Makayoto & Abiy Yenesew. Antimicrobial naphthoquinones from the roots of *Aloe secundiflora*. (P) (IPICS KEN:02)

**Ghana**

**ARUA Launch Conference, 3-4 Apr., Accra.**


**4th AMSEN Workshop, 7-12 May, Accra**


**Workshop on Stochastic Optimal Control and Applications (SOCA), 14-17 Aug., AIMS**

Mamadou Abdoul Diop. Optimisation de portefeuille sous contraintes non convexes. (O) (IPMS BURK :01)

**Pan Africa Chemistry Network Congress 2017: Sustainable Agriculture; How the Chemical Sciences Can Contribute to Food Security for a Growing Population, 7-9 Nov., Accra**

Jacob O Midiwo, Veronica Masila, Aggrey Akimanya, Larry Walker & Ilias Mohammed. Antimicrobial secondary metabolites from Kenyan plants with crop protection potential. (O) (IPICS KEN:02)

**India**

**4th ISTD Northern Indian Regional Conference on “Business Excellence for Sustaining High Performance”, 8 – 9 Dec, ONGC Ltd, Kaulagarh, Dehradun**


**Kenya**

**First African Youth Nuclear Summit, 27-30 March, Nairobi**


**7th Intl SEANAC-Africa analytical & environmental chemistry conference, 28 Nov. - 1 Dec., Mombasa**


V.O. Madadi, S.O. Wandiga & C. Mirikau. Challenges in Addressing Persistent Organic Pollutants in Africa Region. (O) (IPICS ANCAP)


Vincent O. Madadi, Shem O. Wandiga, Charles Mirikau & Enoch Osoro. Perspectives into research and Monitoring of Persistent Organic Pollutants and other pollutants in Africa. (O) (IPICS ANCAP)

Charles W. Mirikau & Vincent O. Madadi. Dioxin and Furans Sources in the Kenyan Environment. (O) (IPICS ANCAP)

A.J. Mmochi. 14 Years ANCAP: Successes, Challenges and The Way Forward. (O) (IPICS ANCAP)

Vane Bonareri Ondiere, Vincent O. Madadi, Fredrick O. Oduor & Austin A. Aluoch. Assessment of Pesticides and Nutrients Contamination in Lake Elementaita Drainage Basin. (O) (IPICS ANCAP)

Osoro EM, Wandiga SO, Madadi OV & Abong'o DA. Polybrominated Diphenyl Ethers (PBDEs) in Nairobi River, Kenya. (O) (IPICS ANCAP)


10th ANCAP Symposium, 2-4 Dec., Mombasa

N.H.H. Bashir. Mothers Milk Contamination. (O) (IPICS ANCAP)

P. Dzomba. Speciation and Degradation of Tetracycline in The Aquatic Environment: Characterization in Terms of Steady State Kinetics that Takes into Account Photolytic, Hydrolytic, Microbial Degradation and Adsorption onto Colloidal and Sediment Particles. (O) (IPICS ANCAP)


K. Gomoro, T. Tolcha & N. Megersa. A modified salle combined with Ld-dilime for a multiclass pesticide residues analysis in sugar and soil using gas chromatography-mass spectrometry. (O) (IPICS ANCAP)

A. Hassain. Occurrence, and Distribution of Cyanobacterium Moorea producens Affecting Seaweed Farmers in Coastal Waters of Tanzania. (O) (IPICS ANCAP)

F.O. Kengara. Sustainable Soil Remediation: The Case of Water-Logging and Compost Amendment for DDT contaminate soil. (O) (IPICS ANCAP)
A. Kerandi. Determinants of Phthalate Ester Levels in Human Body Fluids of Nairobi City and Mashuuru Sub-County Communities. (O) (IPICS ANCAP)

F. Kimbokota. Role of maxillary palpi in tephritidae fruit flies behaviours. (O) (IPICS ANCAP)

V. Madadi, S.O. Wandiga, P. Shiundu & C. Mirikau. Perspectives in Addressing Persistent Organic Pollutants in Africa Region. (O) (IPICS ANCAP)

S.N. Mailu. Determination of Highly Carcinogenic Polyaromatic Hydrocarbons in Water Based on nano alloys. (O) (IPICS ANCAP)

F.A. Masese. Analysis of Heavy Metals, Oil and Grease in Water from The Nairobi River Basin. (O) (IPICS ANCAP)


C. Mirikau. Pedd/F, Pcb and Hcb in Soil and Ash from Brick Production Sites in Kenya, South Africa and Mexico. (O) (IPICS ANCAP)

C.A. Mgina. Levels of Afatoxins in Spices Produced and/or Marketed in Zanzibar and Dar Es Salaam. (O) (IPICS ANCAP)

V.B. Ondiere. Assessment of Pesticides and Heavy Metals Contamination in Soil from Lake Elementaita Drainage Basin. (O) (IPICS ANCAP)

O. Munyati. Molecularly Imprinted Solid Phase Extraction (Mispe): Analysis of Pesticides Residues in Food. (O) (IPICS ANCAP)

F. Orata. Occurrence of Perfluoroalkyl Acids (Pfaas) and Pharmaceuticals in Sewage Sludge from Nine Waste Water Treatment Plants in Kenya. (O) (IPICS ANCAP)


T. Muhizi. Foods and Risk of Contamination During Preparation. (O) (IPICS ANCAP)


M.O. Munyati. Molecularly imprinted solid phase extraction: Analysis of organic compounds. (P) (IPICS ZAM:01)
16th East and Southern Africa Laboratory Managers Association (E-SALAMA) workshop, 5-8 Dec., Mombasa

John Wasswa. Laboratory Information Management Systems (LIMS). (O) (IPICS UGA:01)

Lake Victoria and Three Gorges Reservoir (TGR) Workshop, 5-8 Dec., Kisumu


10th Anniversary Celebration for Africa Kids in Need (A.K.I.N), 12 Dec., Nairobi

J. Simiyu, Making Dreams Come True. (O) (IPPS KEN:02)

Mali

NEXT EINSTEIN FORUM (NEF), Semaine africaine de la science, 29 Jun.-1 Jul., Bamako

C. Nana, A. Ba, S. Souleymane & T. Agnès. Estimation de DCO, DBO5, Fe$^{2+}$ dans l’eau du fleuve par Spectroscopie UV-VIS: Cas de Bamako et environs”. (P) (IPPS MAL:01)

A. Sow, I. Traoré, T. Diallo, & A.Ba. Contrôle qualité des médicaments par Spectroscopie et Microscopie. (P) (IPPS MAL:01)

Traoré B.S., Sanogo S., BA A., Kébré M.B., Konaré H. & Zougmoré F. Observational based analysis of soil moisture response to atmospheric conditions at seasonal scale in Néguéla, Mali. (P) (IPPS MAL:01)

Bakamba dite Djénéba Sacko, S. Sanogo, H. Konaré & A. Ba. Application de la spectroscopie de réflectance du VIS-PIR à l’analyse des sols. (P) (IPPS MAL:01)

Hamidou dit Togoudogoly Sagara, Cheick Diarra & Abdramane Ba, Détection et quantification de traces de gaz troposphériques par la technique de spectroscopie d’absorption différentielle dans la ville de Bamako, Mali. (P) (IPPS MAL:01)

Mauritius

UNESCO-Merck Africa Research Summit, 28-29 Nov., Port Louis

Collen Masimirembwa. Interdisciplinarity, Biomedical Sciences and Investments in Africa – Challenges & Perspectives. (O) (IPICS ZIM:AiBST)

Namibia

Namibia Capacity-Building Workshop, 13-17 Nov., Windhoek

Daniel Mamo. Ethiopian Seismic Station Network. (P) (IPPS ETH:02)
Philippines

15th Asian symposium on medicinal plants, spices and other natural products (ASOMPS XV), 6-8 Dec., Univ. Philippines, Diliman

M. Shoeb. Natural Products for Drug Discovery in Bangladesh. (O) (IPICS BAN:04)

Rwanda

Mathematical Statistics and its Applications in East Africa, 13-17 June, Kigali

I.A. Orowe. Multi-State Transition Models with Censoring in Vertical Transmission of HIV. (O) (IPMS EAUMP)

J.I. Mwaniki. On skewed, leptokurtic returns and pentanomial lattice option valuation via minimal entropy martingale measure. (O) (IPMS EAUMP)

Awich Richard. Spatiotemporal Predictions using Multivariate Singular Spectrum Analysis. (O) (IPMS EAUMP)

R. Sarguta. Four routes to mixed Poisson distributions. (O) (IPMS EAUMP)

Africa Engineering Conference with UNESCO Africa Engineering week, 25-29 Sep., Kigali

A.S. Ingabire, V. Habimana, J.B. Ndayambaje & C. Sekomo. Nutrients recovery from toilet wastewater by struvite precipitation: conditions influencing the process. (O) (IPICS RWA:01)

C. Sekomo. Education and training on waste management. (O) (IPICS RWA:01)

Joint 5th SASA International Conference & 2nd Rwanda Biotechnology Conference, 4-6 Oct., Kigali

J.B. Ndayambaje, J. Habinshut & E. Nteziyaremye Beneyo. Metholophic recombinant Pichia Pastoris for phytase production on D-mannitol/methanol optimization. (O) (IPICS RWA:01)

C. Sekomo. Heavy Metal Removal by Combining Anaerobic Upflow Packed Bed Reactors with Water Hyacinth Ponds. (O) (IPICS RWA:01)

Senegal


A. Diarisso, M. Falland & N. Raouafi. Conducting polymer-based nanocomposites for detection of nitrite ions and compounds of biological interest. (O) (IPICS ANEC)

M. Dieng & D. Gningue-Sall. Complexes of halosilanes and halogermanes with N-heteroaromatic ligands: Electrochemical study and surface functionalization. (O) (IPICS ANEC)

G. Dione, K.M. Diouf, P.M. Guèye & M. Fall. Utility of electrosynthesized polymers/carbon composite electrodes for supercapacitors applications. (O) (IPICS ANEC)

M. Guèye & M. Guène. Nanostructured Ni_{0.9}Co_{2.1}O_{4} spinel oxide: electrochemical, spectroscopic and morphological investigations. (O) (IPICS ANEC)
Samson Khene. Synthesis and Spectroscopic Characterisation of Phthalocyanine based Electro catalyst. (O, plenary) (IPICS ANEC)


Philani Mashazi. Surface characterization and analytical properties in the development of chemical and biological electrochemical sensors. (O, plenary) (IPICS ANEC)

M. Ndiaye, A. Koné & O. Diouf. Electrosynthesis and characterization of N, N-bis (salicylidene)-Ethylene diamine complexes. (O) (IPICS ANEC)


Issa Tapsoba. Développement d’outils analytiques pour le suivi des molécules actives: Application santé et environnement. (O, plenary) (IPICS ANEC)

Ignas Tonlé-Kenfack. Organoclay-based amperometric sensors: Some recent applications and prospects. (O, plenary) (IPICS ANEC)

Shimelis Admassie. Biopolymer-Conducting polymer composites for energy storage and waste water treatment. (O, plenary) (IPICS ANEC)

(IPICS ETH:01)

Opening ceremony and group photo of the 2017 ANEC Workshop. Courtesy of ANEC.
18èmes Journées Scientifiques Annuelles de la Société Ouest-Africaine de Chimie (SOACHIM), 8-11 Aug., Dakar

A.A. Diagne, M. Fall, L. Michael & C. Stéphane. Caractérisation du polybithiophène par mesures d'angles de contacts. (O) (IPICS ANEC)

K.M. Diouf, P.M. Gueye, G. Dione & M. Fall. Importance des électrodes de carbones modifiées par électro-deposition in situ de polymères conducteurs pour la mise au point de d'éléments de superconducteur. (O) (IPICS ANEC)

M. Gueye, P.C.H. Mandiamy & M. Guene. L’oxyde spinelle nqnostructure Ni_{0.9}Co_{2.1}O_4: Étude électro-chimique, spectroscopique et morphologique. (O) (IPICS ANEC)


A. Sankara, J.C.W. Ouédraogo & Y.L. Bonzi-Coulibaly. Étude phytochimique de deux plantes aromatiques, Mentha piperita, et Cymbopogon citratus, en vue du développement d’un biopesticide. (O) (IPICS BUF:01)


Singapore

ASEAN Federation of Physics Societies (APFS) Meeting, 22-24 Mar., Singapore

Chan Oeurn Chey. Physics Education in Cambodia. (O) (IPPS CAM:01)

South Africa

IRIS (The Incorporated Research Institutions for Seismology Data Services) workshop, 20-26 Aug., Pretoria

Birhanu Abera. Status of Seismic Station Network. (O) (IPPS ETH:02)

3rd Worldwide meeting of national young academies, 19-20 July, Johannesburg

Robinson J. Musembi. Millenium goals and the role of young scientist in innovations towards millenium goals. (O) (IPPS KEN:02)
Switzerland

*European Aerosol Conference, 27 Aug.-1 Sep., Zurich*

O.M. Ondimhu, V.A. Ganesan, M.J. Gatari, J.C.M. Marijnissen & L.L. Agostinho. Modeling the effect of lateral forces in the trajectories of droplets electrosprayed in the simple-jet mode. (O) (IPPS KEN:01/2)

S.W. Karuga, M.J. Gatari, E.M. Kelder & J.C.M Marijnissen. Solid-state electrolytes for lithium ion batteries: Application of electrospray technique. (O) (IPPS KEN:01/2)

C.W. Gachara, I. Kapasi, I. Hausz, J.C.M. Marijnissen, M.J. Gatari & L.L.F. Agostinho. Electrohydrodynamic atomization of a non-Newtonian solution with high solid content. (O) (IPPS KEN:01/2)

A.W. Kamau, M.J. Gatari, J.C.M. Marijnissen & L.L.F. Agostinho. Analysis of different liquid-liquid combinations and conditions for the formation of a stable cone-jet mode in electrospray emulsification processes. (O) (IPPS KEN:01/2)

S.M. Gaita, E.S. Thomson, J.B.C. Pettersson, J. Boman, M.J. Gatari & A. Andersson. Particle number and elemental concentrations at the Mount Kenya Global Atmosphere Watch Station in Kenya. (P) (IPPS KEN:01/2)


Tanzania

*DFG-AIMS workshop on incomplete market methods applied to weather and Agricultural risks (IMMAWA), 19-25 Feb., AIMS, Bagamoyo*

J. Kasozi. Enhancing the survival of an insurer by quota-share reinsurance plans (O). (IPMS BURK:01)


S. Mwale, O. Munyati & J. Nyirenda. Optimization of a porous copper-poyaniline anode material for microbial fuel cell application. (O) (IPICS ZAM:01)

C. Mwansa, M. Omunyati & S. Hatwaambo. Optimization of the Optical, Electrical and Morphological Characteristic of PEDOT:PSS doped as a Transparent Electrode. (O) (IPICS ZAM:01)


J. Simiyu. Novel Food & Energy Concept towards Electricity Generation & Food Security. (O) (IPPS KEN:02)

E. Ayieta. Characterization of Iron Nanoparticles Synthesized by High Pressure Sputtering. (O) (IPPS KEN:02)

John N. Ng'ui, Electrophoretic Deposition of Nanoparticulate TiO₂Nb₂O₅ Composite Electrodes Films for Dye Sensitized Solar Cells. (O) (IPPS KEN:02)

Sheila Bisach, F.W. Nyongesa, R.J. Musembi & B.O. Aduda, Optical and Electrical Characterization of Ni-doped Cds Thin Films prepared by Chemical Bath Deposition. (P) (IPPS KEN:02)

M. Mohamed, M.E. Samiji & N.R. Mlyuka, Determination of the Correlation between Aluminium, Tungsten Doping and Hall Effect Parameters on the Optical Properties of VO₂ Based Thin Films. (O) (IPPS MSSEESA)

Maloda Elisante. The Influence of Deposition Temperature on Properties of Multilayered Gallium Doped Zinc Oxide Films Prepared by DC Magnetron Sputtering Technique. (O) (IPPS MSSEESA)

E. Ollotu. Kesterite Solar Cells Prospects for Developing Countries. (O) (IPPS MSSEESA)


Justin John. Optimization of Zinc to Tin Ratio in a Sol Gel Precursor Solution on the Growth and Properties of Annealed CZTS Thin Films. (O) (IPPS MSSEESA)

Alphonce Dominic. Electrochemical Investigation on Corrosion of Mild Steel in Potable Water System Using Persea Americana Seed Extract. (P) (IPPS MSSEESA)

I. Chisulo. Enhancement of Photo-Conversion Efficiency in PCBM:P3HT:SQ3 and Si-P3HT using Plasmonic Cu-Nanoparticles. (O) (IPPS ZAM:01)

S. Mwale, Optimization of a porous copper-polyaniline anode material for microbial fuel cell application. (O) (IPPS ZAM:01)

Thailand

6th BENJAMITRA Network National and international conference on Local Wisdom and Sustainable Development, 26 May 2016, Chiang Mai

P. Deevanhxay, X. Noulorsaytour, A. Souvinkham, D. Ladborvone, S. Keoinpang & K. Phomkeona. Quantification of Some Organochloine Pesticides in Water Samples from Lake and River in Vientiane’s Agriculture Areas by Gas Chromatography Mass Spectrometry. (O)31 (IPICS LAO:01)

31 Not reported 2016
Uganda

Third workshop on gender equality activities in basic sciences, 2-4 May, Kampala

A. Dehayem-Kamadjeu. Gender and Physics: Why so few? (O) (IPPS KEN:04)

Vietnam

CASEAN-2017 Conference, 4-7 Oct., Dalak

Sar Chamrong & Khun Kimleang. Fabrication of Potentiometric Glucose Biosensor Based ZnO Nanorods. (O) (IPPS CAM:01)

Sreng Soukeang & Chan Oeurn Chey. A Design of Simple Super-Capacitor by Using Activated Carbon. (O) (IPPS CAM:01)

Hun Saruon, Chey Thavy & Chan Oeurn Chey. Degradation Methylene Blue in West Water by Using Photo-Catalysis of Zinc Oxide Nanowires. (O) (IPPS CAM:01)

Singsoupho, S., Xayavong, V., Sompasert, S., Xouansoundao, T. & Bhongsuwan, T. Application of 2D-ERT and Seismic Refraction for Delineation of Gypsum of Nadone Village Thakhek District, Khammouane province, Lao PDR. (O) (IPPS LAO:01)

Zambia

FAWE’s conference on girls’ education in Africa, 22-24 Aug., Lusaka

A. Dehayem-Kamadjeu. Plugging the leaky Pipeline in STEM through active involvement of Universities. (O) (IPPS KEN:04)

Zimbabwe

5th China-Africa Water Resources Conference. 31 July – 3 Aug., Victoria Falls


S. Mnkandla, A.H. Siwela & N. Basopo. Assessment of glutathione peroxidase activity and lipid peroxidation status in Lymnaea natalensis freshwater snails, following chronic exposure to heavy metals. (O) (IPICS ZIM:02)

Y.S. Naik. Biomarker use for monitoring water pollution. (O) (IPICS ZIM:02)

D. Tapfuma, N. Basopo & Y.S. Naik. Assessment of selected heavy metals in water, fish and bottom sediment samples from the uMzingwane district. (O) (IPICS ZIM:02)

3rd BMBSZ-FASBMB Symposium on Biochemistry, Biotechnology and Molecular Biology, 14-15 Dec., Harare

Benjamin Bhunu & Stanley Mukanganyama. Evaluation of Re-purposing Clinically Approved Drugs Against Selected Pathogenic Fungal Species. (O) (IPICS ZIM:01)
Molly Mombeshora, Dexter Tagwireyi & Stanley Mukanganyama. Evaluation of the antibacterial effects, mode of action and toxicity profile of *Triumfetta welwitschii* extracts. (O) (IPICS ZIM:01)

Monica Manyawi, Winnie Mozirandi, S. Sithole & S. Mukanganyama. Isolation and Antibacterial Activity Evaluation of the Surface Compounds from the Leaves of *Combretum zeyheri*. (O) (IPICS ZIM:01)

Phillip Mawire, Simbarashe Sithole, Winnie Mozirandi, Molly Mombeshora & Stanley Mukanganyama. Antimicrobial Evaluation of Phytochemicals from *Parinari curatellifolia*: Prospects for Antimicrobial Phytomedicine Development. (O) (IPICS ZIM:01)

Simbarashe Sithole & Stanley Mukanganyama. Anti-proliferative Effects of Selected Plant Surface Leaf Extracts on a Human Leukemic Cell Line. (O) (IPICS ZIM:01)

Stanley Mukanganyama, Batanai Moyo, Rumbidzai Mangoyi, Tariro Chitemerere, Loy Marine, Penelope Tambama, Tafadzwa Nyambuya, Charity Shava, Elaine Chirisa, Martha Sachikonye, Deeds Mushayavanhu, Ruvimbo Mautsa, Molly Mombeshora & Simbarashe Sithole. Inhibition of Drug Efflux Augments Antimicrobial and Anticancer Effects in Pathogenic Microbes and Cancer Cells. (O) (IPICS ZIM:01)

Tatenda Gwenhamo, Molly Mombeshora and Stanley Mukanganyama. Evaluation of the Role of Avondale Stream as a Source of Drug Resistant Bacteria at the University of Zimbabwe. (O) (IPICS ZIM:01)

Vongayi Junior Mushirivindi, Molly Mombeshora, Simbarashe Sithole & Stanley Mukanganyama. Determination of Culturable Bacterial Burden on Hard Surfaces from the University of Zimbabwe and their Drug Resistance Profiles. (O) (IPICS ZIM:01)

Winnie Mozirandi, Dexter Tagwireyi and Stanley Mukanganyama. Evaluation of Antibacterial Activity of *Vernonia adoensis* on *Staphylococcus aureus* and *Pseudomonas aeruginosa*. (O) (IPICS ZIM:01)

Ms. Vongai Mushirivindi won the first price for the Young Scientists Presenters group. Courtesy of IPICS ZIM:01.
Executive Committee members of FASBMB. From left: Prof. Stanley Mukanganyama (Secretary General, Zimbabwe), Prof. Lawal Bilbis (Nigeria), Prof. Iqbal Parker (Treasurer, South Africa) and Prof. Khalid Fares (President, Morocco).
### National/Local

**Table 25.** Number of poster (P) and oral (O) contributions to national/local scientific meeting.

<table>
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### Bangladesh

**National Conference in Physics, 5-7 Jan., Dhaka**

M.A. Islam, S.S. Satter, M.S. Rana & F.A. Khan. Deviation of Magnetic Softness with Increasing of Annealing Temperature of (Fe$_{0.9}$Co$_{0.1}$)$_{73.5}$Cu$_1$Nb$_3$Si$_{13.5}$B$_9$ Amorphous Alloy. (O) (IPPS BAN:02)


F.M. Kamal. Simplified Processes for the Fabrication of Nano Materials Utilizing Electromigration (O). (IPPS BAN:02)

M.M. Rasna, G.M. Bhuiyaq, M.R. Hassan, S.I. Liba, M.N.I. Khan, S.M. Hoque, N.H. Dan & M.A. Hakim. Interconnection between Structural and Magnetic Properties of Nanocrystalline Fe$_{75.5}$Nb$_3$Cu$_1$Si$_{13.5}$B$_9$. (O) (IPPS BAN:02)

M. Anwaruzzaman & S. M. Hoque. Study of Correlation Between Hydrodynamic Diameter and Specific Loss Power (LSP)of Folate Chitosan Coated Cobalt Ferrite Nanoparticle for Cancer Treatment. (O) (IPPS BAN:02)

N.P. Begum, J.U. Ahmed & M.N.I. Khan Structural, Morphological and Optoelectronic Parameters Studies of Thermally Vacuum Evaporated Zinc Telluride Thin Film. (O) (IPPS BAN:02)
M.A. Hossain, M.N.I. Khanand & S.S. Sikder. Complex Permeability of La, Y, Eu incorporation Ni-Zn Ferrites. (O) (IPPS BAN:02)


S. Barua, D.K. Saha M.N.I. Khan, M.R. Hassan & J. Ahmed, Structure and Magnetic Properties of La$_3$Ni$_{0.5}$Zn$_{0.5}$Fe$_2$O$_4$. (O) (IPPS BAN:02)

P.C. Karmaker, S.I. Liba, N.H. Dan, D.K. Saha, M.O. Rahman, P. Nordblad & S.M. Hoque. Exchangespring Behavior of Nd$_{4-x}$Tb$_x$Fe$_{71}$Co$_5$Cu$_{0.5}$Nb$_{1.5}$B$_{11.5}$ Nanocomposite Melt-spum Ribbons. (O) (IPPS BAN:02)

S.I. Liba, M. Tareq, F. Salehin, R. Islam, Z.H. Mahmood & S.M. Hoque. Evaluation of enhanced magnetic properties of NiFe$_2$O$_4$ using as-synthesized ultrafine nanoparticles as the starting material of the sintered products. (O) (IPPS BAN:02)

Kaiyum, M.A. Hossain, M.A. Hakim, S.M. Hoque, F.M. Kamal & M.N.I Khan. Synthesis and Characterization of Polycrystalline Bi$_{0.5}$La$_{0.3}$Fe$_{1.5}$Eu$_{1.3}$O$_3$. (O) (IPPS BAN:02)

M.J. Miah, M.N.I. Khan & A.K.M.A. Hossain, Structural, Dielectric Properties and Magnetoelectric Coupling Studies of Rare Earth Substituted Ba$_{0.95}$Sr$_{0.05}$TiO$_3$-(1-x)BiFe$_{0.9}$Re$_{0.1}$O$_3$[where, Re=Gd And Dy] Multiferroic Ceramic. (O) (IPPS BAN:02)

S.M. Hoque. Nanotechnology in Biomedical Applications at the Molecular Level. (O) (IPPS BAN:02)


M.M. Rana, G.M. Bhuiyan, M.R. Hassan, S.I. Liba, M.N. Khan, S.M. Hoque and M.A. Hakim, Investigation of structural and Magnetic Behaviors of Nanocrystalline Fe$_{70.5}$Cr$_3$Cu$_1$Nb$_2$Si$_{13.5}$B$_9$ Amorphous Ribbons. (P) (IPPS BAN:02)


M.A. Gafur, M.N.I. Khan, A.A. Momin & A.K.M.A. Hossain. Enhancement of Magnetoelectric Properties of Ca$_{1-x}$Sr$_x$(Fe$_{0.5}$Ta$_{0.5}$Ta$_{0.5}$)O$_3$. (P) (IPPS BAN:02)


T.I. Khan, M.S. Mahmud, M.R. Hassan, A.R.M. Tareq, M.A. Hakim, A.A, Begum, Z. Begum, & N.I. Khan. Impact of Structural Factors on Magnetic Properties of Ba$_{1-x}$Sr$_x$Ti$_{0.5}$Mn$_{0.5}$O$_3$. (P) (IPPS BAN:02)


S. Barua, D.K. Saha, M.N.I. Khan, M.R. Hassan & S.J. Ahmed. Structure and Magnetic Properties of La$_{8}$Ni$_{0.5}$Zn$_{0.5-x}$Fe$_2$O$_4$. (P) (IPPS BAN:02)


M.M.I. Khan, D.K. Saha, M.N.I. Khan, S.J. Ahmed, M.R. Hassan, N. Begum & A.T.M.K. Jamil. The Impact of Microstructure on Magnetic Properties of Ni$_{0.6-x}$Zn$_{0.4}$Mn$_{0.5}$Fe$_2$O$_4$. (P) (IPPS BAN:02)


F.T.Z. Toma, M. Al-Amin, I.N. Esha, K.H. Maria & M.N.I. Khan. Preparation and Characterization of Ba-ceramic with the addition of Ca and Sr Oxides. (P) (IPPS BAN:02)

S.M. Hoque, P.C. Karmaker, S.I. Liba, D.K. Saha, N.H. Dan, M.O. Rahman & P. Nordblad. Magnetic Properties and Microstructure of Exchange-Based Nd$_{2}$Fe$_{14}$B/Fe$_{2}$B. (P) (IPPS BAN:02)

A.A. Sied & K.S. Rabbani. Monitoring hemoglobin level in blood using electrical impedance and optical techniques. (O) (IPPS BAN:04)

A. Ali, M. Abdul Kadir & K.S. Rabbani, Development of an Electrical Impedance Based Spirometer. (O) (IPPS BAN:04)


M. Moniruzzaman, K. Sen, M. Al-Amin, M. M. Hasan & K. Siddique-e Rabbani, A Smart Pressure Relief Alarm System for Wheel Chairs. (P) (IPPS BAN:04)

S. Shahnaz & K. S. Hossain. Structural and Electrical Properties of Cobalt Coordination Polymer Based Nano-wire on Solid Surfaces. (O) (IPPS BAN:05)

F. Mustafa & K.S. Hossain. Solution Properties of Polyethylene Oxide (PEO) Using Ubbelohde viscometer. (P) (IPPS BAN:05)

N. Jahan & K.S. Hossain. Temperature Dependence of Electrical Properties of Biopolymer Gel. (P) (IPPS BAN:05)

Dhaka University Science Society & IEEE (DUSS-IEEE), 3 Feb., Dhaka

K Siddique-e Rabbani. Importance of Relevant and Target Oriented Research in Science & Technology. (O, inv.) (IPPS BAN:04)

Export Promotion Bureau, 19 Mar., Dhaka

K Siddique-e Rabbani. Export Potential of Bangladesh in Electronics. (O, inv.) (IPPS BAN:04)

38 Annual Conference of Bangladesh Chemical Society (BCS), 31 Mar., Chittagong

M. Shoeb and N. Nahar, Natural Products for Drug Discovery in Bangladesh. (O) (IPICS BAN:04)

M.R. Zamir, M.A. Rahman, A. Amin & M. Saifur Rahman. Toxic Metal Concentration in Antidiabetic Herbal Preparation. (O) (IPICS BAN:05)

Conference on 'Electronics and ICT', Organised by Bangladesh Electronics Society, 20 Apr., Dhaka


The National Conference 2017 of International Society for Ethnopharmacology (ISE) - Congress of Society for Ethnopharmacology (SFEC), 21 May, Dhaka

Z. Sultan. Development and validation of HPLC methods for standardization of herbal drugs. (O) (IPICS NITUB)

Symposium on Environmental Chemistry for Securing Water Quality, Bangladesh Council of Scientific and Industrial Research (BCSIR), 30 Jul.), Dhaka

N. Nahar. Pesticide and its application. (O) (IPICS BAN:04)

A.M.S. Alam. Water Crisis: Clean Water Scarcity in Bangladesh. (O) (IPICS NITUB)

One Day Symposium on Food Safety and Quality for Better Health, HEQEP CP 3257, 7 Aug., Dept. Chem., Univ. Dhaka

M. M. Islam. Toxic Metals in Marine Fish Samples of Bangladesh. (O) (IPICS BAN:04)

R. Islam. Analysis of Beef samples by LC-MS/MS. (O) (IPICS BAN:04)

S. A. Mou. Analysis Suphur drugs in Poultry meat samples by LC-MS/MS. (O) (IPICS BAN:04)
Teaching Methodology, Assessment Methods and Pedagogy, 5 Nov., Dhaka

K.S. Rabbani. Making Physics popular through effective teaching. (O) (IPPS BAN:04)

Conference on the occasion of the International Day of Medical Physics, 18 Nov., Dhaka

K Siddique-e Rabbani. Telemedicine: Technology development and deployment experience. (O) (IPPS BAN:04)

Workshop on Artificial Intelligence & Applications (IWAIA), 18 Dec., Dhaka

K.S. Rabbani. Should we go for AI in Telemedicine for rural areas? (O) (IPPS BAN:04)

Benin

VIème Colloque des Cultures et Technologies, 25-30 Sep., Université d’Abomey Calavi


Bolivia

IX Congreso de Ornitología y Conservación de Aves en Bolivia. 17-21 May, Cochabamba

Torrico-Bazoberry, D. Primer registro de Theristicus caerulescens (Aves: Threskiornithidae) en los Yungas, nuevo registro altitudinal y nuevo registro para el departamento de Cochabamba. (O) (IPICS LANBIO)
**Botswana**

**BIUST Research and Innovation Symposium 2017 (RDAIS 2017), 12-14 June, Palapye**

Irene Maina, Veronica Obuseng & Florence Nareetsile. Removal of Heavy Metals Using Treated Waste Material (Moringa Oleifera Seed Pods). (P) (IPICS SEANAC)

Mohau Moshoeshoe & Veronica Obuseng. Simultaneous Determination of Nitrate, Nitrite and Phosphate in Environmental Samples by High Performance Liquid Chromatography with UV detection. (P) (IPICS SEANAC)

**Burkina Faso**

1ères Journées Scientifiques de l’Ecole Doctorale Sciences et Technologies, UOJ Pr JKZ, 25-28 Oct., Ouagadougou

J.C.W. Ouedraogo, B. Ouedraogo, A. Sankara & Y.L. Bonzi-Coulibaly. Etude phytochimique de plantes à propriétés biopesticides et leur application pour le maraîchage. (O) (IPICS BUF:01)

B. Ouedraogo, J.C.W. Ouedraogo & Y.L. Bonzi-Coulibaly. Mise en évidence de polyphénols dans Cleome gynandra L. et Cassia nigricans Vahl., plantes à potentiel biopesticide. (P) (IPICS BUF:01)

A. Sankara, J.C.W. Ouedraogo & Y.L. Bonzi-Coulibaly. Etude phytochimique de deux plantes aromatiques, Mentha piperita et Cymbopogon citratus en vue du développement d'une formulation biopesticide. (P) (IPICS BUF:01)

Ollé Rodrigue KAM, Corneille BAKOUAN, Tibo ZOROME, Brahima SORGHO, Tambi RAMDE, Boubié GUEL & Lucien BONOU. Contribution à l'étude de capteurs électrochimiques pour la détermination d'éléments traces métalliques dans des eaux souterraines. (P) (IPICS BUF:02)

Dimanche Régie OUEDRAOGO, Corneille BAKOUAN, Tibo ZOROME, Brahima SORGHO, Boubié GUEL & Lucien BONOU. Adsorption de l’arsenic en milieu aqueux par une latérite naturelle du Burkina Faso. (P) (IPICS BUF:02)

Mamadou OUEDRAOGO, Tambi RAMDE, Boubié GUEL & Lucien BONOU. Renforcement de barrière de la patine artificielle du cuivre par le benzotriazole (BTA) et mercapto-benzothiazole (MBT). (P) (IPICS BUF:02)

Ousmane TAPSOBA, Tambi RAMDE, Boubié GUEL & Lucien BONOU. Etude d'une monocouche hybride organique-inorganique respectueuse de l'environnement pour la protection d’un alliage d'aluminium contre la corrosion. (P) (IPICS BUF:02)


Fifth workshop of ISP BUF:01 Energy and Environment Research Group, 14–16 Dec., Ouagadougou

Bruno Korgo. Energy policy and research opportunities in Burkina Faso. (O) (IPPS BUF:01)

Senghane Mbodji. Recombination velocity and solar cell capacity. (O) (IPPS BUF:01)

Boureima Kabore. Numerical and Experimental Study of an Air-Ground Heat Exchanger used for the Cooling of a Habitat in the Sahelian Zone: application to the city of Ouagadougou in Burkina Faso. (O) (IPPS BUF:01)

Béwentoré Sawadogo. Max-stable spatial processes: applications to climate data in Burkina Faso. (O) (IPPS BUF:01)

Magloire Pakouzou. Analysis of caustics and dimensioning of a cylindro-parabolic sensor. (O) (IPPS BUF:01)

Germain Ouedraogo. Convective solar drying of tomato and okra using the solar tower dryer. (O) (IPPS BUF:01)

Issa Zerbo. Influence of the angle of incidence and the intensity of the radio waves on a silicon solar cell. (O) (IPPS BUF:01)

Adama Ouedraogo. A theoretical study of radio wave attenuation through a polycrystalline silicon solar cell. (O) (IPPS BUF:01)

R. Konate. Impact of the doping rate on internal quantum efficiency. (O) (IPPS BUF:01)

Drissa Ouedraogo. Modeling/simulation of heat transfer in kapok wool: contribution to the development of a pressure cooker adapted to the restoration sector. (O) (IPPS BUF:01)

Martial Zoungrana. Peaceful use of nuclear technologies. (O) (IPPS BUF:01)

Imbga Kossi. Study of the thermal and mechanical performances of the laterite blocks with the Nere pod for the thermal insulation of the building in the tropical zone. (O) (IPPS BUF:01)

Amadou Konfé. Numerical study of natural convection in a cavity filled with a porous material. (O) (IPPS BUF:01)

Thierry Ky. Heating of the air in a fixed hemispherical concentration system for various applications. (O) (IPPS BUF:01)

Chile

XI Reunión Anual de la Sociedad Chilena de Evolución and L Reunión Anual de la Sociedad de Genética de Chile, 9-11 Nov., Puerto Varas

Torrico-Bazoberry, D., Pinto, C.F., Flores-Prado, L., Fontürbel, F.E., Niemeyer, H.M. Selección natural en un insecto fitófago subsocial en dos plantas hospederas. (O) (IPICS LANBIO)
Ethiopia

Annual Conference of the Ethiopian Physical Society, Feb. 3-4, Addis Ababa

Yosef Abebe & Mulugeta Bekele. The effect of cold spots on two symmetric locations of a quartic potential and the study of stochastic resonance in a semiconductor layer. (O) (IPPS ETH:01)

Mesay Tilahun & Tatek Yergou. Investigation of Statics and Dynamics Properties of Three and Four-Arms Star Polymer with 2D Monte Carlo Simulation. (O) (IPPS ETH:01)

Mathematics for the Advancement of Science and Technology, 27-28 Apr., Adana, 28-27

Hunduma Legess. Dirichlet Power Series. (O) (IPMS ETH:01)

Feyissa Kebede. Maximization and Minimization Problems Involving Symmetric Sources. (P) (IPMS ETH:01)

Kenya

UNESCO scientific camps of excellence for mentoring girls into STEM in Kenya, 9-15 Apr., Meru

A. Dehayem-Kamadjeu. Equality and parity in STEM for peace and development. (O) (IPPS KEN:04)

The Second Kenyatta University Workshop on Mathematical Modeling, 12-16 June, Nairobi

J. Kagunda. Dynamic systems Modeling of Malaria. (O) (IPMS EAUMP)

Researcher link workshop with University of Surrey, UK, “Exploring Kenyan Biodiversity: Chemistry, Pharmacology and Commercialization”, 10-14 Sep., Naivasha

Jacob O Midiwo. The history and current status of natural products research in Kenya. (O) (IPICS KEN:02)

Francis Mulaa. Developing new drug screening target identification and validation strategies that are not susceptible to currently existing mechanisms of drug resistance. (O) (IPICS KEN:02)

Abiy Yenesew, Negera Abdissa, Milkyas Endale, Hoseah M. Akala and Máté Erdélyi. Phytochemical investigation of Pentas species (Rubiaceae) towards management of malaria. (O) (IPICS KEN:02)

Kenya Air Quality Annual Conference, 29 Nov., Nairobi

M. Ogot, J. Vande Hey, M. Gatari, J. Nyangaya & R. Panchal. Development of an Air Quality Monitoring Programme for Nairobi and Exploration of Avenues for PM2.5 Levels Reduction: University of Nairobi (Kenya) and University of Leicester (UK). (O) (IPPS KEN:01/2)
Laos


V. Choulamany, S. Kongmany, P. Inthaboun, V. Liamphachanh & S. Phommalard. Monitoring of Nitrate and Nitrite Contamination in Some Processed Products. (O) (IPICS LAO:01)

P. Deevanhxay, B. Her, F. Mekaye, L. Vue & S. Koeingpheng. Characterization and Quantification of Bioactive Compounds in Some Medicinal Plants of Laos. (O) (IPICS LAO:01)

S. Kongmany, V. Choulamany, K. Phomkeona, P. Keobountham & S. Khothavong. Monitoring and Evaluating Hong-Xeng Wastewater Quality for Green and Sustainable Development. (O) (IPICS LAO:01)

K. Phomkona, B. Mingkuan & S. Incheng. Quantification of Minerals and Nutrients Content in Moringa Oleifera Lam in Laos. (O) (IPICS LAO:01)


Myanmar

Symposium on Science and Innovation for Environmental Pollution and Climate Change, 9-10 Aug., Yangon

Kalyar Thwe & Tin Ma Ma Tun. Health Risk Assessment of Heavy Metals Contamination in Paddy Soil and Rice Grains at Mandalay Region. (O) (IPPS MYA:01)

Conference on Science and Technology Development, 1-2 Nov., Pyin Oo Lwin

Kalyar Thwe & Tin Ma Ma Tun. Assessing Health Risk of Heavy Metals in Rice Grown around the Industrial Zones of Mandalay, Myanmar. (O) (IPPS MYA:01)

Than Zaw Oo. Electrochromics and Photovoltaics: The Energy Saving Advances. (O) (IPPS MYA:01)

Myanmar Academy of Arts and Science Paper Presentations, 27 Oct., Yangon

Thet Thet Cho. Sensitivity and Application to Low Z-Elements by X–Ray Detection System. (O) (IPPS MYA:01)

Hnin Hnin Hlaing. Theoretical Interpretation on D(π⁺,K⁺)X Missing Mass Spectrum of J-PARC E27 Experiment. (O) (IPPS MYA:01)

Win Win Maw. Theoretical Analysis on J-PARC E31 Experiment. (O) (IPPS MYA:01)

Aye Aye Min. A Single Particle Energy Levels in Λ13C, Λ14C and Λ15C. (O) (IPPS MYA:01)
Rwanda

*UR International Conference, 14-16 June, Kigali*

E. Kalisa, D. Sebastian, J. Gasore & A.S. Ingabire, Temperature and Air pollution relationship in Kigali City (Rwanda). (O)  
(IPICS RWA:01)

Senegal

*Journées mathématique, 18-22 Dec., Saint-Louis*

Hamidou Toure. Existence de Solution Pseudo Presque Automorphe de type Stepanov. (O)  
(IPMS BURK :01)

Abdou Sène. Contrôle de la dynamique des fluides: état de l’art et contribution de l’école sénégalaise. (O)  
(IPMS BURK :01)

South Korea

*Korean Mathematical Society Spring Meeting, Apr.*

Veng Sotheara. A semi-analytic formula for European option price approximation under a multi-scale Heston stochastic volatility model. (O)  
(IPMS SEAMaN)

Sweden

*Trends in Green Chemistry, 3 Apr., Stockholm*

(IPICS KEN:01)

*Swedish space plasma physics meeting, 14-15 Feb., Kiruna, Sweden*

S. Aol, S. Buchert, E. Jurua & E. van Groningen. Irregularities and scintillations, end to end from Swarm to the ground. (O)  
(IPPS UGA:02)

Science & Technology Day, 17-19 May, Chalmers University of Technology, Gothenburg

(IPICS ETH:01)

Inorganic Days, 12-14 June, Nynäshamn

(IPICS KEN:01)
Tanzania

3rd TCS conference and the 6th FASC congress, 11-15 Sep., Arusha

G. Kinunda. A Study on Trans influence and π-conjugation effects on ligand substitution reactions of Pt(II) complexes with tridentate N/S-Donor ligands. (O) (IPPS MSSEESA)

Uganda

Gender Conference, 2 May, Kampala

P. Muheki. Attitudes, perceptions and how they affect performance in Sciences: A case of Physics (Gender Equity/equality in focus). (O) (IPPS UGA:02)

Zambia

Zambia Science Conference, 23-26 Oct., Livingstone

M.O. Munyati & Isabel Chisulo. Organic solar cells: optical and morphological characteristics of P3HT:SQ3:PCBM blends containing copper nanoparticles. (P) (IPICS ZAM:01)


James Nyirenda, Elijah Ngumba, Johanna Myllyniemi, Anthony Gachanja & Tuula Tuhkanen. Electrospray Ionisation-LC-MS Quantification of Pharmaceuticals in Boreholes, Shallow Wells and Urine from Diverting Dry Toilets: Case Study of Chunga Area-Lusaka. (O)(IPICS ZAM:01)

Zimbabwe

5th Annual Research Day, National University of Science & Technology 27-28 July, Bulawayo


UZ Research Week, 24–29 Jul., Harare

Other Communications

This section lists other scientific communication activities such as internal seminars, invited talks at other institutions, participation in panels, and media communication.

**Bangladesh**

Md. Mazharul Islam. Organochlorine Compounds and Arsenic, Cadmium and Lead in Marine Fish Samples of Bangladesh. Univ. Dhaka, 3 May, MSc seminar. (21 part) (IPICS BAN:04)

Rabiu Islam. Studies of fatty acid compositions and level of Cr and Hg in marine fish samples. Univ. Dhaka, 3 May, MS seminar. (21 part) (IPICS BAN:04)

Jannatul Noor Jeouty. Studies of microplastic, organochlorine compounds and toxic metals in marine fish samples of Sundarbans Regions. Univ. Dhaka, 3 May, MSc seminar. (21 part) (IPICS BAN:04)


Anowar Hossain Khan. Organochlorine Compounds and Heavy Metals in Sediment Samples from Coastal Area of Bangladesh. Univ. Dhaka, 3 May, MSc seminar. (21 part) (IPICS BAN:04)


Tonima Mustafa. Organohalogen Residues of Fishes from Different Trophic Levels. Univ. Dhaka, 20 Aug., PhD seminar. (23 part) (IPICS BAN:04)


Abida Sultana. Chemical Contaminants in Rice, Spice and Vegetable Samples. Univ. Dhaka, 13 Mar., PhD seminar. (22 part) (IPICS BAN:04)

Zerin Sultan. Studies of Chemical contaminants in different food stuff. Univ. Dhaka, 3 Aug., PhD seminar. (22 part) (IPICS BAN:04)

Rehnuma Tabassum. Study of Water Quality Parameters and Environmental Contaminants in the Aquatic Ecosystem of the Bay of Bengal. Univ. Dhaka, 4 May, MSc seminar. (20 part) (IPICS BAN:04)

**Belgium**

Collen Masimirembwa. Application of preclinical drug metabolism and pharmacokinetics in molecular design and design of clinical pharmacokinetics and pharmacogenetics studies - addressing DMPK liabilities of drugs used in the treatment of infectious diseases, 28 Aug., at the UCB Pharmaceutical Company, Brussels. (IPICS ZIM:AIBST)
Collen Masimirembwa. Biobanking and Genomics Research for Precision Medicine in Africa - a 20 year journey from lab bench to patient bedside, 29 Aug., at the UCB Pharmaceutical Company, Brussels. (IPICS ZIM:AiBST)

**Benin**


**Burkina Faso**

A. Sankara. Female scientific day (scientific communications of female PhD students). IRD conference room, 30 Mar., Ouagadougou.


**China**


**Ethiopia**


Kebede Feyissa. A review on Naturally occurring compounds with antmycobacterial activity. Dec., 15 part. (IPICS ETH:02)


**France**

Y.L. Bonzi-Coulibaly. De la synthèse organique aux produits naturels: un parcours de recherché. Seminar at CIRAD Montpellier, 6 Oct. (IPICS BUF:01)

**Gambia**

Abdou Sene, Numerical methods for partial differential equations (Cours de Master dispensé à l'University of The Gambia (UTG)). (IPMS BURK:01)

**Germany**

Collen Masimirembwa. Pharmacogenomics in Africa and implications for precision medicine, 24 Aug., at the BfArM (German Medicines and Devices Authority), Bonn. (IPICS ZIM:AiBST)

The MSc student Jean Damascene Mbarubucyeye, a Msc student gave an oral presentation at the Astroparticle Schools, 4 Oct., Germany; "Identification of potential blazar candidates among Fermi LAT unidentified sources". (IPPS, EAARN)

**Japan**

P. Deevanhxay, B. Her, F, Mekaye, L. Vue & S. Koeingpheng. Characterization and Quantification of Bioactive Compounds in Some Medicinal plants of Laos. International collaborative research meeting at Ritsumekan University, 23-25 Feb. (IPICS LAO:01)


**Kenya**

L.W. Njenga. Revised Common Regulations for Graduate Studies. Workshop for training Deans/Directors and Chairpersons of Faculty Graduate Students Committee at CCU, 10 May, Nairobi. (IPICS KEN:01)


Lydia W. Njenga. Graduate Supervision and Examination Policy Implications. CARTA Postgraduate Supervision, 23-24 Nov. Nairobi. (IPICS KEN:01)
Laos

S. Kongmany & P. Deevanhxay. Seminar for undergraduate students on organochlorine pesticides in medicinal plants and the environment, 22 March, Dept. Chem, NUOL, 52 part. (IPICS LAO:01)


Seam Ngonn, Dept. Math., RUPP. Linear Algebra at its applications. Course 12-17 Apr. at Dept Math., NUOL. (IPMS SEAMaN)

Chan Sony. Introduction to Programming with MATLAB: Applications to numerical solution to PDEs. Course 2-9 Nov. at Dept Math., NUOL. (IPMS SEAMaN)

Mali

Ouateni Diallo. Analyse numérique des EDPs: méthode des différences finies. Seminar at Université des Sciences, des Techniques et des Technologies de Bamako. (IPMS BURK :01)

Myanmar

Seam Ngonn, Dept. Math., RUPP. Introduction to Programming with MATLAB: Applications to numerical solution to PDEs, 1-9 Nov, Univ. Mandalay. (IPMS SEAMaN)

Netherlands


Nigeria


Rwanda

Lydia W. Njenga. 7th CARTA Faculty and administrators’ Training workshop, 17-19 July, Univ-Rwanda, Gikondo Campus, Kigali. (IPICS KEN:01)

Eric Musengimana. Contribution to the Assessment of the effect of anthropogenic activities to Rwanda air quality. Univ. Rwanda, School of Science, Seminar, May, 20 part. (IPICS RWA:01)

Bosco Sibomana. The study of Seasonal Speciation of Heavy Metals in Spring Water located in Volcanic Rocks in Musanze District (Northern Province, Rwanda). Univ. Rwanda, School of Science, Seminar, June, 17 part. (IPICS RWA:01)

Janvier Habinhutu. Analysis of Structural and Digestability of Resistant Starch from Rwanda Cassava Varieties. Univ. Rwanda, School of Science, Seminar, Aug., 23 part. (IPICS RWA:01)
Daniel Umereweneza. The Occurrence of Mycotoxins in Foodstuff consumed in Rwanda: Preservation against Fungi using Plants Extracts. Univ. Rwanda, School of Science, Seminar, Aug., 23 part. (IPICS RWA:01)

Valens Habimana. Multi-residue determination and ecological risk assessment of pesticides in the lakes of Rwanda. Univ. Rwanda, School of Science, Seminar, Dec., 12 part. (IPICS RWA:01)

Senegal


Diene Ngom. Cours de méthode des éléments finis en master 2 de Mathématiques et applications à l'université de Ziguinchor. (IPMS BURK:01)

Aboudramane Guiro, Système dynamique et comportement asymptotique des EDO. (IPMS BURK:01)

Sweden

Jean Claude Ouédraogo gave a talk at the Dept. Pure and Applied Biochem., Chemistry Center, Lund Univ.; Supercritical Fluid extraction of flavonoids from local plants of Burkina Faso. (IPICS BUF:01)

Ruth Mbabazi. Copolymerization of CO₂ with epoxides using supported zinc catalysts. Lund Univ., Nov. (IPICS UGA:01)


Switzerland


Tanzania

J.M. Okwoyo. Lectures on Numerical Analysis, AIMS Tanzania Centre, Bagamoyo, 20 Mar. - 7 Apr. (IPMS EAUMP)

Uganda


Seam Ngonn. On a nonlinear pseudo parabolic problem. Seminar at Makerere Univ., 8-12 Jul. (IPMS SEAMaN)
**United Kingdom**


**USA**


**Zambia**

C. Chileshe. On the approach of Fischer matrices to Group extensions: some recent contributions, PhD seminar. (IPMS EAUMP)

U.N. Haankuku. Bayesian statistical analysis of ART combinations on the treatment of HIV/AIDS epidemics, PhD seminar (IPMS EAUMP)

M. Kikonko. The spectrum of general Sturm-Liouville Problems, PhD seminar. (IPMS EAUMP)

M. Mbokoma. Stochastic Differential equations and applications to epidemiological models. Seminar. (IPMS EAUMP)

X. Mbaale. Group Codes as Ideals in Semisimple Group Algebras. Seminar. (IPMS EAUMP)


V.M. Nawa. Comparison of the EM algorithm and the Quasi-Newton method. Seminar. (IPMS EAUMP)

Z. Mumba. Equatorial upwelling and link to El nino phenomenon (Dynamic Oceanography). Seminar. (IPMS EAUMP)

H. Sabao. Infinite games and quasi-uniform box products. Seminar. (IPMS EAUMP)

N. Monde. On group factorisations. Seminar. (IPMS EAUMP)

**Zimbabwe**


M. Mombeshora. Evaluation of the antibacterial effects, of phytochemicals from leaves of *Triumfetta welwitschii* extracts on bacteria. UZ, Dept. Biochem., 14 Jun., D.Phil. sem. (20 part.) (IPICS ZIM:01)
M. Mombeshora. Effects of ethanol, acetone and total leaf extracts from Triumfetta welwitschii extracts on membrane integrity of P. aeruginosa. UZ, Dept. Biochem., 13 Sep., D.Phil. sem. (20 part.) (IPICS ZIM:01)

Simbarashe Sithole. University of Zimbabwe, Department of Chemistry. Isolation, purification and characterisation of the antiproliferative compounds from the roots of Dolichos kilimandascharicus. UZ, Dept. Biochem., 5 Jun., MSc. seminar. (14 part.) (IPICS ZIM:01)

Winnie Mozirandi. Effect of V. adoensis acetone extracts on protein and nucleic acid leakage from P. aeruginosa. UZ, Dept. Biochem., D.Phil. sem., 14 Jun., D.Phil. sem. (20 part.) (IPICS ZIM:01)

D. Tapfuma. Experimental design for the exposure of juvenile Clarias gariepinus and adult Mesobola brevianalis to environmentally relevant concentrations of selected xenobiotic metal species associated with ASGM activities, PhD seminar. (10 part) (IPICS ZIM:02)

D. Tapfuma. Cadmium contamination in water, bottom sediment, soil and poultry eggs from the environs of active gold panning sites, PhD seminar. (15 part) (IPICS ZIM:02)

N. Kutywayo. Effects of mining activities in matebeleland south on the freshwater snail Helisoma duryi, BSc proposal presentation. (15 part) (IPICS ZIM:02)

M. Tazibona. Use of water hyacinth (Eichhornia crassipes) in the phytoextraction of pharmaceuticals in industrial effluent, BSc proposal presentation. (15 part) (IPICS ZIM:02)

C. Masiye. The comparison of Brassica oleracea (Kale), Helianthus (Sunflower) and Jatropha curcas L capabilities to phyto remediate heavy metals from contaminated landfill soil of Ngozi Mine in Bulawayo, Zimbabwe, BSc proposal presentation. (15 part) (IPICS ZIM:02)

N.I.P Muusha. Heavy metal pollution status of aquatic bodies in Bulawayo metropolitan province, BSc seminar. (15 part) (IPICS ZIM:02)

T. Nsingo. An investigation on the toxicological effect of detergents on enzymatic activities of bream fish (Oreochromis mossambicus), BSc proposal presentation. (18 part) (IPICS ZIM:02)

N.T. Ndlovu. Effects of contaminants from a former mine on enzyme system on land organisms, Achatina fulica and Eisenia Fetida, BSc proposal presentation. (18 part) (IPICS ZIM:02)

Yussuf Wilson. Evaluating the effects of pesticide residues from tomato farming on biochemical parameters in land snails in Bulawayo, BSc proposal presentation. (18 part) (IPICS ZIM:02)
Arranged Meetings

Table 26. Countries where meetings and courses were arranged, with research groups or scientific networks as organizers or co-organizers. Number of meetings (No) is indicated, as well as total number of participants (part.) reported. (S.Am. – South America)

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<th>IPMS</th>
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Bangladesh

12th ANRAP National Seminar on Antidiabetic Plant Materials Separation Techniques and Biological Testing, 22 July, BUHS, Dhaka. (80 part.) (IPICS ANRAP)

7th ANRAP Workshop on Chemical Studies and Bioassay of Antidiabetic Plant Materials, 23-27 July, BUHS, Dhaka. (19 part.) (IPICS ANRAP)

The Annual General Meeting (AGM) of NITUB, 11 Mar., Dhaka. (60 part.) (IPICS NITUB)

NITUB’s 98th – 103rd Executive Committee meetings, Dhaka. (8 part.) (IPICS NITUB)

NITUB’s 64th Training Programme, on the use, maintenance and trouble-shooting of Ultra-Violet, Visible and Infrared Spectrophotometer, 8-13 Apr., CARS, Univ. Dhaka. (17 part.) (IPICS NITUB)


NITUB’s 66th Training Programme. on the use, maintenance and trouble-shooting of Common Medical Instruments. BUHS, Dhaka, 28 Oct. - 2 Nov. (14 part.) (IPICS NITUB)

NITUB’s 67th Training Programme, on use, maintenance and trouble-shooting of High Performance Liquid Chromatography (HPLC), Bangladesh Council of Scientific and Industrial Research (BCSIR), Dhaka, 23-29 Dec. (27 participants) (IPICS NITUB)

Marie Curie Research Scholarship award ceremony, 6 Aug. Dhaka. (45 part.) (IPPS BAN:04)
NITUB’s 64\textsuperscript{th} Training Programme. Courtesy of NITUB.

NITUB’s 65\textsuperscript{th} Training Programme. Courtesy of NITUB.
Botswana

9th International Conference of the Africa Material Research Society (AMRS), 1-14 Dec. Gaborone. (500 part.; co-organized with AMRS) (IPICS SEANAC)

Burkina Faso

Proposal writing; work shop of doctoral school for PhD students and young researchers, Ouagadougou University, 15-17 Feb. (74 part.) (IPICS BUF:01)
Bioactive molecules: structure, synthesis, biosynthesis, Ouaga I University, March 2017, MSc II level seminar. (8 part.)


Conference on Rotating molecules in a computer, Dr Francesco Colizzi de l’Institut de Recerca Biomèdica, Université de Barcelone, Spain, Ouaga I Univ., 19 Apr. (8 part.)

MSc Course on pollution, May 2017. (32 part.)

Mass spectrometry, MSc I level seminar, May 2017, Ouaga I Univ. (25 part.)

Scientific poster conception, for PhD students, July 2017 (30 part.)

Competition of female PhD students on scientific communication, 27 Oct. (11 part.)

Competition of female PhD students on scientific communication, Prof. Yvonne Bonzi, standing, to the left; the six finalists to the right. Courtesy of IPICS BUF:01
Workshop on proposal writing and guideline, Koudougou 7-10 Dec. (5 part.) (IPICS BUF:01)

Boubié Guel, "Méthodes électrochimiques", course given at the Chemistry Department, Faculty of exact and applied Sciences, Apr., MSc level. (15 part.) (IPICS BUF:02)

Colloque International sur la Sécurité Alimentaire en Afrique (CIS2A) du Reseau Ouest Africain de Biotechnologies; «Les Biotechnologies dans les Systèmes de Production Durables pour une Sécurité Alimentaire et Nutritionnelle en Afrique», 8-10 Nov., Ouagadougou. (150 part.) (IPICS RABiotech)

African week of energy and Renewable Energy (Semaine des Énergies et Énergies renouvelables d’Afrique, SEERA), coorganized with the Ministry of Energy, 2-6 May, Ouagadougou. (>1,000 part.) (IPPS BUF:01)

5th workshop of the IPPS BUF:01 Energy end Environment Research Group, 14-16 Dec., Ouagadougou. (50 part.) (IPPS BUF:01)

**Cambodia**

Chemistry Teacher Training Workshop, Kampong Som, 20-21 Apr. (30 part.) (IPICS CAB-CCS)

Cambodian Chemical Society Annual Symposium "Chemistry and Life", Phnom Penh, 14-15 Sep. (250 part.) (IPICS CAB-CCS) (IPICS CAB:01)

Chemistry Teacher Training Workshop, Rattanakiri. (40 part.) (IPICS CAB-CCS) (IPICS CAB:01)

Defense the proposal, progress report and final research report for Master Students Batch 4 on 19 Mar., 28 Mar., and 22 Oct. (about 30 part.) (IPICS CAB:01)


**Cameroon**

Journée de Chimie Analytique, 27-29 Sep., N’Gaoundéré. (200 part.) (IPICS ANEC)

**Ethiopia**

W. Mammo. Total syntheses of natural products. Dept. Chem. AAU, Feb. – June. (2 part; MSc 1, PhD 1)


Training workshop on Atomic Force Microscopy, Addis Ababa, 1-30 Nov. (5 part)

17th NAPRECA Symposium, 13-16 Aug., Addis Ababa. (50 part.)  (IPICS NAPRECA)

Mathematics for the Advancement of Science and Technology, Adana, 27-28 Apr. (130 part.)  (IPMS ETH:01)

Multihazard workshop, 21-22 Nov., Addis Ababa. (60 part.)  (IPPS ETH:02)

Kenya

10th ANCAP symposium, “Chemical pollutants effect on the environment, food security, public health and produce export in Africa” 2-4 Dec, Mombasa (26 part; 5 F/21 M)  (IPICS ANCAP)

L.W. Njenga. Workshop for Training Deans/Directors and Chairpersons of Faculty Graduate Students Committee, 10 May, Nairobi. (80 part.)  (IPICS KEN:01)

L.W. Njenga & D.K. Kariuki. CARTA Postgraduate Supervision, 3-24 Nov., Nairobi. (52 part.)  (IPICS KEN:01)


8th Kenyan Mathematical Olympiad, School of Mat., UoNBI Chiromo Campus, Nairobi. (426 part.)  (IPMS EAUMP)

3rd Nairobi workshop in Algebraic Geometry, Nairobi, 14-16 June. (21 part.)  (IPMS EAUMP)

EAUMP-ICTP school on Modern Functional Analysis, Kenya School of Government, Nairobi, 19 June - 7 July. (44 part.)  (IPMS EAUMP)

Laos

ANFEC Training Program on Gas Chromatography (GC/MS), Quantification and Quality Assurance at Dept. Chem., NUOL. 9-27 January (18 part.)  (IPICS ANFEC)


Introductory training on operation of LC-MS/MS, NUOL, 26-30 Nov. (5 part.)  (IPICS LAO:01)
Group photo of ANFEC 2017 Training Program participants, ANFEC Committee, and teachers Ms. Ulla Eriksson and Mr. Michael Strandell. Courtesy of IPICS CAB:01.

ANFEC Training Program; participants and Mr. Michael Strandell. Courtesy of ISP

ANFEC Committee meeting. Courtesy of ISP.
P. Deevanhxay gave a training course on Analysis of Heavy Metals in Medicinal plants by AAS, 24-28 July, for staff at the Inst. Traditional Medicine, Vientiane. (8 part.) (IPICS LAO:01)

S. Kongmany gave a training course on Pesticides Analysis by GC/ECD, 13-17 Nov., for staff and researchers at the Dept. Chem. of Champasuck University. (10 part.) (IPICS LAO:01)

CIMPA School on Introduction to the mathematical analysis of differential equations and real-life applications, Vientiane 3-13 Jan. (47 part.) (IPMS SEAMaN)

Workshop on Research capacity building and some research outcomes of PhD holders, 3-7 July. (15 part.) (IPMS SEAMaN)

Workshop on Advanced PDE in Application with MATLAB, 20-24 Mar. (13 part.) (IPMS SEAMaN)

Myanmar

International Conference on Science and Mathematics Education in Developing Countries, 9-13 Nov., Mandalay Univ. (350 part.) (IPMS SEAMaN)

Rwanda

Workshop on Real Time Outcome Planning and Evaluation (ROPE), Univ. Rwanda, Dept. Chem., 22 Aug. (23 part.) (IPICS RWA:01)

Senegal

ANEC 2017 Workshop "Analytical Electrochemistry for promotion of a Clean Environment", 11-13 Apr., Dakar. (50 part) (IPICS ANEC)

Senegalese Mathematics days, 18-22 Dec., Saint Louis. (120 part.) (IPMS BURK:01)

Tanzania

ESARSWG executive meeting, 13 Oct., Dar es Salaam. (4 part.) (IPPS ESARSWG)

Workshop on Acquisition, Processing and Interpretation of reflection and refraction of seismic data, 9-14 Oct., Univ. Das er Salaam. (14 part.) (IPPS ESARSWG)


The 11th Annual Coordinating Board Meeting of MSSEESA, 3 Nov., Univ. Dar es Salaam. (14 part.) (IPPS MSSEESA)

2nd MSSEESA Technical Training Workshop on Instrumentation, 11-12 Dec., Univ. Dar es Salaam. (19 part.) (IPPS MSSEESA)

2nd Science Camp for Female Students taking Physics and Mathematics, 4-8 Dec., Univ. Dar es Salaam. (42 part.) (IPPS MSSEESA)
Uganda

“Where are we now/Way forward”, Gender Sensitizing Math School/Workshop with 30 speakers and 430 registered student participants, organized by Dr. Betty Nannyonga, 2-3 May, Makerere Univ., Kampala, financed by an ISP Gender Equality Promotion Grant. (460 part.)

Science Students Gender Awareness Training, 6 Nov., Makerere Univ. (400 part.)

ESARSWG executive meeting, 12 May, Directorate of Geological Survey and Mines, Entebbe. (20 part.)

The 10th Annual Coordinating Board Meeting of MSSEESA, 5 May, Kampala. (12 part.)

Astrophysics workshop on data analysis, 6-0 Feb., Mbarara. (20 part.)

Zambia


International Workshop on Algebra and its Applications, Livingstone, 2-7 Apr. (18 part.)

Zimbabwe

3rd BMBSZ-FASBMB Symposium on Biochemistry, Biotechnology and Molecular Biology, 14-15 Dec., Harare. (65 participants)

Seminar for ISP visitors highlighting projects in the research group, 20 Oct. (21 part)

Workshop on the Single Cell Gel Electrophoresis (Comet) assay and its applications, 23-27 Nov. (12 part.)

5th China-Africa Water Resources Conference. 31 July – 3 Aug., Victoria Falls. (79 part.)

2nd Water Workshop, Indaba, 13 Dec., Gwanda. (41 part.)
This section lists scientific and related visits, sandwich students’ stays, and attendance to courses and meetings not listed elsewhere. The entries are given essentially as reported, and listed country wise, following the country where the visit took place, and then according to ISP research/network code. ISP funding is through the group/network indicated, unless other information is given.

**Bangladesh**

Prof. Biswapati Mukherjee (M) from India, visited Dept. Chem., Univ. Dhaka, 6-8 Mar., to conduct Viva Voce examination and PhD defense of Farzana Saleh. The visit was funded by Univ. Dhaka.  
(IPICS BAN:04)

Prof. Mangala Manandhar (M) from Nepal, visited Dept. Chem., Univ. Dhaka, 14-17 Mar., to conduct Viva Voce examination and PhD defense of Abida Sultana. The visit was funded by Univ. Dhaka.  
(IPICS BAN:04)

Prof. Bani Tala Patra (M) from India, visited Dept. Chem., Univ. Dhaka, 4-7 Aug., to conduct Viva Voce examination and PhD defense of Zerin Sultana Munia, and to attend the One Day Symposium on Food Safety and Quality for Better Health. The visit was funded by Univ. Dhaka.  
(IPICS BAN:04)

Dr. Ashraf Ali (M) from Nasa, US, visited Dept. Chem., Univ. Dhaka, to discuss about his research work and any future collaboration. The visit was funded by Univ. Dhaka.  
(IPICS BAN:04)

(IPICS BAN:04)

Prof. Per Nordblad (M), Dept. Engineering Sci., UU, visited the collaborating laboratories at BUET and AECD 11-12 Dec., and discussed with postgraduate research students.  
(IPPS BAN:02)

Dr. Dorian Liepman (M) Dept. Mechanical and BioEng., Univ. California Berkeley, USA, visited the group at AECD, 18 Dec.  
(IPPS BAN:02)

(IPPS BAN:04)

Dr. Akihiko Takada (M), Kyushu Univ., Japan, visited the group 27 Nov. - 5 Dec. to discuss current research project and to give hands-on training to our students. ISP funded the visit.  
(IPPS BAN:05)

**Belgium**

Yvonne Bonzi Coulibaly (F) visited Universities of Mons and Bruxelles in Belgium, CIRAD in Sep.-Oct.  
(IPICS BUF:01)

Boubié Guel (M) visited the Univ. Mons, in Nov. The visit was funded by the PIC project Belgium.  
(IPICS BUF:01)
Dr. Jean Pierre Munyampundu (M) visited the Inst. Biology Molec. Med., Univ. Libre Bruxelles, to conduct a study on New functional genomic techniques, 19 Oct. - 19 Dec. The visit was funded by ARES Project, Belgium.

(IPICS RWA:01)

Mr. Emmanuel Nkurunziza (M) visited the Lab. Volatolomie, Univ. Liege, to do a training on using and maintaining of Gas Chromatography/Mass Spectroscopy (GC/MS), 23 Sep. - 21 Nov. The visit was funded by ARES Project, Belgium.

(IPICS RWA:01)

**Burkina Faso**

Dr. Francesco Colizzi (M), Institut de Recerca Biomèdica, Univ. Barcelona, Spain, visited the group, Apr.

(IPICS BUF:01)

Prof. Jonas Yao Andji-yapi (M) from Univ. Félix Houphouet-Boigny (Côte d'Ivoire), visited the Dept. Chemistry, Univ. Ouagadougou in Jul., and give a course in the field of materials sciences. The visit was funded by IPICS BUF:02.

(IPICS BUF:02)

Prof. Louise Anin Atchibri (F) from Univ. Nangui Abrouga, Cote d'Ivoire, visited CRSBAN, LABSAN, in Nov.-Dec., to discuss with PhD student in nutrition and to discuss with some colleagues in nutrition. This visit was funded by her university.

(IPICS RABiotech)

Prof. Yaovi Ameyapoh (M) from Univ. Lome, Togo, visited CRSBAN 7-11 Nov. to participate to the international colloquium. This visit was funded by ISP budget.

(IPICS RABiotech)

Prof. Amani Georges (M), Univ. Nangui Abrouga, Côte d'Ivoire, visited CRSBAN, 7-12 Nov., to participate to the international colloquium. This visit was funded by ISP budget.

(IPICS RABiotech)

Prof. Tidjiani Abdoul Salam (M), Univ. Djamena, Tchad, visited CRSBAN 7-11 Nov., to participate to the international colloquium. This visit was funded by ISP budget.

(IPICS RABiotech)

Prof. Ibrahima Ndoye (M, Univ. Dakar, Senegal, visited CRSBAN 7-11 Nov., to participate to the international colloquium. This visit was funded by ISP budget.

(IPICS RABiotech)

Dr. Bassierou Ndoe (M), Univ. Sine Saloum, Senegal, visited CRSBAN 7-11 Nov., to participate to the international colloquium. This visit was funded by ISP budget.

(IPICS RABiotech)

Dr. Thomas Dadie (M), Univ. Nangui Abrouga, Côte d'Ivoire, visited CRSBAN 7-11 Nov., to participate to the international colloquium. This visit was funded by ISP budget.

(IPICS RABiotech)

Prof. Emile Amouziou (M), Univ. Lome, Togo, visited CRSBAN 7-11 Nov., to participate to the international colloquium. This visit was funded by ISP budget.

(IPICS RABiotech)

Prof. Fatiou Toukourou (M), Univ. Abomey Calavi, Benin, visited CRSBAN 7-11 Nov., to participate to the international colloquium. This visit was funded by ISP budget.

(IPICS RABiotech)

Prof. Ramatou Sidikou (F), Univ. Niamey, Niger, visited CRSBAN, 7-11 Nov., to participate to the international colloquium. This visit was funded by ISP budget.

(IPICS RABiotech)

Prof. Mamadou Diop (M), Univ. Dakar, Senegal, visited CRSBAN in Mar., to participate to the jury of the PhD defense of Mamadou Sadji. This visit was funded by ISP budget and by the university of Ouaga 1 Pr Joseph Ki-Zerbo (JKZ).

(IPICS RABiotech)
Prof. Babacar Touré (M), Univ. Dakar, Sénégal, visited CRSBAN in May, to participate to the jury of the PhD defense of Aimé Désiré Kabore. This visited was funded by Unives. Ouaga 1 Pr. JKZ. 

(IPICS RABiotech)

Dr. Sylvie Boisramé (F), Univ. Bretagne France, visited CRSBAN in May 2017, to participate to the jury of the PhD defense of Aimé Désiré Kabore. This visited was funded by Unives. Ouaga 1 Pr. JKZ. 

(IPICS RABiotech)

Prof. Lamine Baba-Moussa (M), Univ. Abomey-Calavi, Benin, visited CRSBAN in July, to participate to the jury of the PhD defense of Aimé Désiré Kabore. This visited was funded by the budget of ISP and Univ. Ouaga 1 Pr. JKZ. 

(IPICS RABiotech)

Prof. Ibrahima Ndoye (M), Univ. Dakar, Sénégal visited CRSBAN, in Mar., to participate to the jury of the PhD defense of Pauline W. Ouedraogo. This visited was funded by the budget of ISP and by Univ. Ouaga 1 Pr. JKZ. 

(IPICS RABiotech)

Dr. Zinzidorf Nanga Yesse (M), Univ. Houpouhet Boigny d’Abidjan, Côte d’Ivoire, visited CRSBAN in Oct., to participate to the jury of the PhD defense of Dinanibè Kambiré. This visited was funded by the budget of ISP and Univ. Ouaga 1 Pr. JKZ. 

(IPICS RABiotech)

Prof. Emile K. Amouzou (M), Univ. Kara, Lome, visited CRSBAN in May, to participate to the jury of the PhD defense of Marceline M. Makalao. This visited was funded by the budget of ISP and Univ. Ouaga 1 Pr. JKZ. 

(IPICS RABiotech)

Pr. FODE Madé (M) Univ. ABOU MOUMOUNI of Niamey, Niger, visited for the defense of theses. The visit was funded by Univ. Ouagadougou and ISP. 

(IPPS BUF:01)

Pr. Kossi NAPO (M), Univ.Lomé, Togo, visited in July for the defense of theses. The visit was funded by Univ. Ouagadougou and ISP. 

(IPPS BUF:01)

Dr. Emmanuel RAMDE (M), Kwame N'krumah Univ. Sci. Technol., Ghana visited in July for a thesis defense. The visit was funded by Univ. Ouagadougou and ISP. 

(IPPS BUF:01)

Pr. Senghane M’BODJI (M), Univ. Cheick Anta Diop, Senegal visited for the defense of a thesis. The visit was funded by Univ. Ouagadougou and ISP. 

(IPPS BUF:01)

Cambodia

Prof. John Briggs (M), Univ. Freiburg, Germany, visited the Dept. Physics, RUPP Jan-April and Oct-Dec. to discuss scientific research on solar concentration and teach in the MSc program in physics. 

(IPPS CAM:01)

Hyeonsik Cheong (M), Sogang Univ., S. Korea, visited Dept. Physics in Feb. for discussion and promotion of the physics research and future collaboration. 

(IPPS CAM:01)

Hakim L. Malasan (M), Bandong Ins.Technol., Indonesia, visited Dept. Physics in Jan. to discuss scientific research on astronomy and teach in the MSc program in Physics. 

(IPPS CAM:01)


(IPPS CAM:01)


(IPPS CAM:01)
Canada

Prof. T.A. Batubenge (M) paid a research visit to Univ. Montreal from Dec. (IPMS EAUMP)

Cameroon

Bah Foly-Adjie (F), Central African Republic, visited the Analytical Chemistry Laboratory at the University of Yaounde 1, Nov. 2017 to Feb. 2018, on a research topic related to Decontamination of effluents by electrocoagulation. The visit was financed by AUF. (IPICS ANEC)

China

Prof. Wendimagegn Mammo Deneke (M) visited and delivered a lecture at the Natl. Engineering Research Center for Technology Equipment of Green Coating, Lanzhou Jiaoteng Univ., host: Prof. Chenglong Wang, Lanzhou, China, 11-15 June. The visit was financed by a grant from the Swedish Research Council and by Lanzhou Jiaoteng Univ. of China. (IPICS ETH:01)

Prof. Wendimagegn Mammo Deneke (M) visited and discussed future research collaboration at the School of Materials Science and Engineering, host: Prof. Zhou Weiguo, Changzhou, China, 15-16 June. The visit was financed by a grant from the Swedish Research Council and by Changzhou University of China. (IPICS ETH:01)

Ethiopia

Prof. Yvonne Bonzi Coulibaly (F) paid a visit to the UNESCO water chair at Mekelle university, 18-21 May. The trip was funded by SWINDON. (IPICS BUF:01)

Dr. Ergang Wang (M) from Chalmers Univ. Technol., Gothenburg, Sweden, visited the Dept. Chem., AAU 29 May – 3 June, to take part in the PhD thesis defense of Zewdneh Genene and to deliver a lecture. The visit was financed by a grant from the Swedish Research Council. (IPICS ETH:01)

Prof. Wouter Maes (M), Univ. Hasselt, Belgium, visited Dept. Chem., AAU, 29 May– 2 June, to serve as an external examiner for the PhD thesis defense of Zewdneh Genene, to deliver a lecture, and to discuss research collaboration. The visit was financed by AAU. (IPICS ETH:01)

Dr. Genesis Ankah (M), INM-Leibnz-Institute for New Materials, Germany, is on research visit from 1 Nov. to 30 April 2018 to conduct teaching and research at the Materials Science Program of the Dept. Chem., AAU. The visit is financed by Centrum für Internationale Migration und Entwicklung (CIM), Germany. (IPICS ETH:01)

The PhD student Kevine Kamga (F) from Yaounde University, Cameroon, visited the IPICS ETH:02 lab 21 Oct. to 21 Dec., to study the phytochemistry of an anticancer plant known as Ficus umbellata. Ms Kamga was funded by AGNES mobility grant for her living, while her partial living and research cost was covered from the ISP grant. (IPICS ETH:02)

Network Members participated at the 4th Middle-East and Africa regional IAU Meeting (MEARIM), 22-25 May, Addis Ababa. (IPPS, EAARN)

Network Members participated in the International School of Young Astronomers (ISYA), 8-9 May, Addis Ababa. (IPPS, EAARN)
Mr. Isaac Habumugisha (M) visited Entoto Observatory in Ethiopia for three months (May –July). This was a research visit funded by ISP through the EAARN Project. (IPPS EAARN)

Mr. Antoine Mahoro (M) visited Entoto Observatory in Ethiopia for two months, from 17 Dec., funded by ISP through the EAARN Project. (IPPS EAARN)

Prof Mulugeta Bekele (M), Dr Tatek Yergou (M) and Dr Lemi Demeyu (M) paid a research visit to Dire Dawa Univ., 19-25 Dec. The visit was funded by ISP. (IPPS ETH:01)

Prof. Mesfin Tsige (M) and Prof. Gujrati P. (M), Univ. Akron, Akron, OH, USA. visited the Dept. Phys. as external examiners for a PhD defense in June. Prof. Prof. Mesfin Tsige gave a lecture on “General properties of polymers”. (IPPS ETH:01)

Prof. Genene Molla (M), Kwazulu Natal Univ., South Africa, visited Dept. Phys. as external examiner for a PhD defense in June. (IPPS ETH:01)

Collaborators from the Univ. Bristol and Southampton visited the group a couple of times to service their seismic stations under the RiftVolc project (IPPS ETH:02)

A team of seismologists and experts from Strasbourg visited the group to deploy a seismic station network. (IPPS ETH:01)

Dr. Pheneas Nkundabakura (M), Mr Antoine Mahoro (M) and Miss Beatrice Nyiransengiyumva (F) conducted a research visit to the Ethiopian Science and Technology Institute, Addis Ababa. The two students attended the the 39th International School for Young Astronomers (ISYA), 8-19 May, Addis Ababa. (IPPS RWA:01)

Finland

Ouaro Stanislas (M) paid a research visit to Turku Univ. in Aug. (IPMS BURK:01)

France

An internship (03 month) was realized by Mr Gilles NGALANI POUANGAM (M), a PhD student of the University of Yaoundé I, Cameroun at Aix-Marseille University (France), in the Laboratoire de Chimie de l’Environnement under the supervision of Pascale PRUDENT. (IPICS ANEC)

Yvonne Bonzi Coulibaly (F) visited CIRAD at Montpellier, Oct. (IPICS BUF:01)

Guiro Aboudraman (M) paid a research visit to Laboratoire de Mathématiques et Applications de Metz, Metz, in May. (IPMS BURK:01)

Hamidou Toure (M) paid a research visit to Univ. Limoges, 10-16 Sep. (IPMS BURK:01)

Ghana

Benjamin Ouédraogo (M) had a research training in antimicrobial activities of plants extracts at Tamale Univ., Nov. 2017 to Jan. 2018, funded by EXCEED and ISP budget. (IPICS BUF:01)

Mamadou Abdoul Diop (M) paid a research visit to AIMS Ghana, 13-20 Aug. (IPMS BURK:01)
Hungary

Dr. Hudson Angeyo Kalambuka (M) participated at Capacity building in nuclear security, Hungarian Academy of Sciences, Budapest, 2 Oct. - 15 Dec. The visit was sponsored by IAEA. (IPPS KEN:04)

India

Prof. Modou Fall (M), Senegal, visited Mahatma Gandhi University, Kottayam, Kerala, India, 2 Oct. - 2 Nov., funded by the CV Raman Fellowships Programme for African Researchers. (IPICS ANEC)

Dr. Zakir Sultan (M), Centre for Advanced Research in Sciences, Univ. Dhaka, Bangladesh, were at Dept. Chem., Indian Inst. Technol., Chennai, as visiting scientist Sep. - Oct., under TWAS-UNESCO associateship scheme, funded by TWAS. (IPICS NITUB)

Mr Daniel Wambua Mutua (M) visited UTL Technologies in Bengaluru, India, 28 Nov 28 2016 – 11 Feb. 2017 to undertake a Training Program on Advanced Networking (MCSE, CCNA, A+). The visit was sponsored by Government of India under the Indian Technical & Economic Cooperation Programme (ITEC). (IPPS KEN:05)

Italy

Negesse Tilahun (M, PhD student) made a research visit at Univ. Tor Vergata, Rome, 10 Dec. 2016 - 1 July 2017). (IPPS EAARN)

Dr. Jean Uwamahoro (M) attended the Extended workshop on space weather effects, 22 May -2 June, in Trieste. (IPPS RWA:01)

Japan

Prof. Nilufar Nahar (F) and Prof. Mohammad Shoeb (M) visited Shimadzu Laboratory GADC, Kyoto, 23-26 Mar. The visit was funded by AQC, Dhaka. (IPICS BAN:04)

Dr. Kesiny Phomkeona (F) and Dr. Phengxay Ddeevenhxay (M) paid a visit to Ritsumeikan Univ., Japan, 23-25 Feb. The visit was funded by Ritsumeikan Univ. (IPICS LAO:01)

Mr. Sopha Keoingpheng (M) paid visit to Dept. Appl. Chem., Osaka Univ., 23 Nov. - 2 Dec. The visit was funded by Sakura Sciences Program supported by JST Japan. (IPICS LAO:01)

Dr. Harinarayan Das (M), spent 14 July t- 27 Aug. at Res. Inst. Electrons (RIE), Shizuoka Univ. (IPPS BAN:02/2)

Chan Oeurn Chey (M), Exchange Students Program, Nigata Univ., 8-12 Mar. The visit was funded by Nigata Univ. (IPPS CAM:01)

Kenya

A delegation from RECETOX Regional center for POPs capacity building visited UoNBI in May 2017 to discuss capacity building for monitoring and analysis of POPs. (IPICS ANCAP)

Prof. Bernard Thole (M), Univ. Malawi visited Dept. Chem., UoNBI 1 Sep. – 30 Nov., as a Senior Faculty Visiting Fellowship. Funded by CARTA. (IPICS KEN:01)
(IPICS KEN:01)  
(IPPS KEN:02)

Prof. Victor Kuete (M), Cameroon, visited Dept. Chem., UoNBI.  
(IPICS KEN:02)

Florence Nantaba (M) participated in the workshop on Scientific communication and publication, Training Center for Communication (TCC), Nairobi, 23-30 Sep.  
(IPICS UGA:01)

Prof. Lennart Hasselgren, Former Head of ISP and Director of the Physics program, visited the groups in Kenya 6 Mar.  
(IPPS)

Prof. Ernst Van Groningen visited the groups in Kenya, 14-12 Dec.  
(IPPS)

Prof. Michael J. Gtari attended the Food Africa annual meeting, World Agroforestry Center (ICRAF), Kenya, 5 Jul. 
(IPPS KEN:01/2)

(IPPS KEN:01/2)

Prof. Jan Marijnissen (M) from Florinda, USA, and Wetsus, The Netherlands, spent three visits at INST, 4-17 Feb., 9-30 June and 4-15 Nov., for student supervision, research and teaching. The visits were funded by ISP.  
(IPPS KEN:01/2)

Prof. Arne Jacobson (M) and Dr. Jiayang Li (M), Humboldt State Univ. Arcata, California, USA, visited 6 Feb., to deliver light meters and discuss progress of the laboratory. The visit was funded by the Lighting Global Program.  
(IPPS KEN:01/2)

Dr. F. Pope (M), Univ. Birmingham, UK, visited 22-27 Mar., to discuss air pollution research collaboration and joint funding applications, funded by Univ. Birmingham.  
(IPPS KEN:01/2)

Prof. Luewton Agostinho (M), NHL Univ. Appl. Sci., the Netherlands, visited 13-14 Apr. for student supervision, funded by NHL Univ. Appl. Sci. and partially by ISP.  
(IPPS KEN:01/2)

Prof. Peter Verheijen (M), Delft Univ. Technol., the Netherlands, visited 10-14 June for teaching. The visit was funded by ISP and partially by his own funds.  
(IPPS KEN:01/2)

Prof. Prabhu Rajagopal (M), Indian Institute of Technology (IIT), Madras, Chennai, visited 11-14 July to discuss collaboration, funded by IIT-Madras and partially by ISP.  
(IPPS KEN:01/2)

Prof. J. Blomgren (M), IBEx Company, Sweden, visited 31 Mar., to discuss collaboration and deliver a seminar, funded by IBEx. He also visited Dept. Physics, at UoNBI.  
(IPPS KEN:01/2)  
(IPPS KEN:02)

(IPPS KEN:02)

Ms Lucia Katungwa (F), MSc student at Dept. Chem., UoNBI, spent four months with the group using the Potentiostat PGSTAT 12 for cyclic voltametry and the Spectrophotometer for absorbance.  
(IPPS KEN:02)
MSc student Ms Gaceri K. Jane (F), Kenyatta Univ., spent one month using the EDWARDS AUTO 306 and the Spectrophotometer for Transmittance and Reflectance measurements.  
(IPPS KEN:02)

Miriam M. Kinene (F) and Lydia Moraa (F), MSc students at Kenyatta Univ., spent one month using the Spray Pyrolysis setup and the Spectrophotometer for transmittance and reflectance measurements.  
(IPPS KEN:02)

Mornica A. Megel (F), MSc student at Kenyatta Univ., spent one month using the EDWARDS AUTO 306 and the Spectrophotometer for transmittance and reflectance measurements.  
(IPPS KEN:02)

Zachary N. Nkunu (M), MSc student at Dept. Chem., UoNBI, spent six months with the group working with the Potentiostat PGSTAT12 for cyclic voltametry and the Spectrophotometer for absorbance measurements.  
(IPPS KEN:02)

Nicholas Musila (M), PhD student at Kenyatta Univ., spent two months using the Screen Printing Apparatus Spectrophotometer for transmittance and reflectance measurements, and using the Solar Simulator.  
(IPPS KEN:02)

Hijah Abbas (M), MSc student at UDSM, Tanzania, spent three weeks with the group to use the Solar Simulator, sponsored by MSSEESA.  
(IPPS KEN:02)  
(IPPS MSSEESA)

Prof. Tom Otiti (M), Makerere Univ., Uganda and Dr. Christopher Maghanga (M), Kabarak Univ., visited for the MSSEESA Coordination Board Hand Over Meeting, 13-14 Dec.  
(IPPS KEN:02)  
(IPPS MSSEESA)

Laos

Mr. Michael Strandell (M) and Ms. Ulla Erickson (F) from Dept. Applied Environmental Science, Stockholm Univ., Sweden, visited Dept. Chemistry, NUOL, 9-27 Jan., to conduct a training course on GC and Quality Assurance. The visit was funded by IPICS ANFEC.  
(IPICS ANFEC)

Prof. Mohammad Shoeb (M), Dept. Chem., Univ. Dhaka, paid a research visit to Dept. Chemistry, NUOL, 9-27 Jan, and to attended an ANFEC meeting and training program on GC and Quality Assurance. The visit was funded by IPICS ANFEC.  
(IPICS ANFEC)  
(IPICS BAN:04)

Dr. Sorya Proum (F, Royal University of Phnom Penh, Cambodia, visited Dept. Chem., NUOL 9-27 Jan., to attended an ANFEC meeting and training program on GC and Quality Assurance.  
(IPICS ANFEC)  
(IPICS CAB:01)

Dr. Santi Kongmany (M) paid visit to Dept. Chemistry, Champasuck Univ., Laos, 7-10 Sep. The visit was funded by IPICS LAO:01.  
(IPICS LAO:01)

Prof. Seiji Iwasa (M) and Dr. Soda Chanthamath (M), Dept. Environ. and Life Science, Toyohashi Univ. Technol., Japan, visited Dept. Chem., NUOL, 6-8 Feb., to discuss about student exchange program. The visit was funded by Toyohashi Univ. Technol.  
(IPICS LAO:01)

Prof. Ken Tanaka (M), Dept. Pharmacy, Coll. Pharmaceut. Sci., Ritsumeikan Univ., Japan, visited Dept. Chem., NUOL 1-3 Mar., to discuss about possible collaboration on bioactive compounds in medicinal plants of Laos. The visit was funded by Ritsumeikan Univ.  
(IPICS LAO:01)
Prof. Hidehiro Sakurai (M), Dept. Appl. Chem., Osaka Univ., Japan, visited Dept. Chem., NUOL 11-12 May, to discuss Sakura Sci. Progr. for staff exchange. The visit was funded by Osaka Univ. (IPICS LAO:01)

Mr. Michael Strandell (M) and Dr. Tomas Alsberg (M), Dept. Appl. Environ. Sci., Stockholm Univ., Sweden, visited Dept. Chemistry, NUOL 20 Nov - 9 Dec., to install an LC/MS MS and conducted training on the operation. The costs for the visit were shared by IPICS LAO:01 and OPCW. (IPICS LAO:01)

Assoc. Prof. Vudtichai Parassuk (M) Dept. Chem., Chulalongkorn Univ., Thailand, visited NUOL 27-28 Dec., to discuss about a student exchange program and gave a workshop on Computational Chemistry. The visit was funded by Chulalongkorn Univ. (IPICS LAO:01)

Mali

Dr Moustapha SAWADOGO (M), LPCTM 5 Univ. Ouagadougou visited in Dec., to do some experiments with TGA-TDA Equipment (Labsys-Evo) and with Atomic Absorption Spectrometer (AAS); he discussed about scientific exchange. (IPICS MAL:01)

Netherlands

N. Nyambane (M) did electrospray droplet size experiments at NHL Univ. Appl. Sci., 16 July-15 Oct. The visit was funded by ISP and partially by host university. (IPPS KEN:01/2)

Prof. Michael J. Gatari (M) travelled for scientific visits and supervision of students at Delft Univ. Technol. and NHL Univ. Appl. Sci., the Netherlands, 2-15 Sep., funded by ISP. (IPPS KEN:01/2)

Morocco

Mamadou Abdoul Diop (M) paid a research visits to Marrakech and Taza, 5-15 Sep. and 1-15 Oct. (IPMS BURK:01)

Ouaro Stanislas (M) paid a research visit to Univ. Cadi Ayyad, in Sep. (IPMS BURK:01)

Philippines

Mohammad Shoeb (M) paid a research visit to Univ. Philippines, Diliman, 6-8 Dec. The visit was funded by the Ministry of Education, Government of Bangladesh. (IPICS BAN:04)

Senegal

Harouna Sangaré (M) and Soumaïla Dembélé (M) paid a research visit to Univ. Saint Louis, 18-31 Mar. (IPMS BURK:01)

Guiro Aboudramane (M) paid a research visit to Univ. Assane Seck, Ziguinchor, Jan. (IPMS BURK:01)

Singapore

Prof. Nilufar Nahar (F) and Mohammad Shoeb (M) received LCMS-A103 Training at Shimadzu (Asia Pacific) Pte Ltd, 21-22 Mar. The visit was funded by AQC, Dhaka. (IPICS BAN:04)
Chan Oeurn Chey (M), visited Singapore and the Formation of ASEAN Physics Federation Society, IAS, NTU, 22-24 Mar. The visit was funded by NTU. (IPPS CAM:01)

**Slovakia**

Prof. Mohammad Shoeb (M) paid a research visit to the testing centre of nuclear, biological and chemical protection and reference chemical laboratory, Zemianske Kostol’any, 6-16 Nov. The visit was funded by OPCW. (IPICS BAN:04)

**South Africa**

Prof. Mohammad Shoeb (M) paid a research visit to University of Cape Town, 16-18 Oct. The visit was funded by IPICS BAN:04. (IPICS BAN:04)

Prof. D.K. Kariuki (M) & Dr. R.A. Odhiambo (F) visited Univ. Western Cape 25-27 Apr., and were hosted by Prof. Martin Onani. A fact-finding trip to start collaboration. Funded by ISP. (IPICS KEN:01)

Prof L. Njenga (F) visited Univ. Western Cape 18 Oct., and were hosted by Prof Martin Onani to discuss about the collaboration and the research progress with both the students and the host. Funded by ISP. (IPICS KEN:01)

Dr. Onesmus Munyati (M) had a consultative meeting and research visit to Univ. Pretoria, 9-12 Apr. Funding from National Science and Technology Council (Zambia). (IPICS ZAM:01)

Dr Norah Basopo (F) paid a visit to Cape Peninsula University of Technology, South Africa, July 2017. The visit was to see the Prof Somerset's lab and discuss collaborative work. The visit was funded by the ISP grant. (IPICS ZIM:02)

Prof. Michael J. Gatari (M) participated in an IGAC Africa Science Activity: Scoping workshop “How should we address current air quality and atmospheric science questions for the continent?”, CSIR Pretoria, 7-9 June, funded by IGAC and partially by ISP. (IPPS KEN:01/2)

Bruce Kathurima Mutegi (M) and Daniel Wambua Mutua (M) visited the Council for Geoscience in Pretoria 20-26 Aug. to undertake training on Seiscomp3 and ObsPy, funded by Incorporated Research Institutions for Seismology (IRIS). (IPPS KEN:05)

Mr. Geoffrey Andima (M) paid a research visit to the South African National Space Agency, 5 June – 2 Sep. The visit was funded by ISP. (IPPS UGA:02)

**South Korea**

Abubakr M.A. Morgan (M), Assist. Prof, Herbicides, Dept. Pesticides & Toxicology, Fac. Agric. Sci, Univ. Gezira, Sudan, finished 2 yrs. of Post Doc in South Korea. (IPICS ANCAP)

Mr. David M. Maina (M) visited major Nuclear-Related Universities, Institutes and Companies in 4-8 Sep. The visit was funded by the Korean Nuclear Association for International Cooperation (KNA). (IPPS KEN:01/2)

**Spain**

An internship (3 month) was realized by Amal Raouafi (F) a PhD student of Univ. Tunis El Manar at Barcelona, Spain. (IPICS ANCAP)
Network staff participated in the ESAC Data Analysis and Statistics Workshop, 28 Nov. - 1 Dec., Madrid.  

Mr. Antoine Mahoro (M) participated in the ESAC Data analysis and statistics workshop, 28 Nov. - 1 Dec., Madrid.  

Sudan

Dr. Abdelhalim Babiker M. Mahmoud (M), Swiss Tropical & Public Health Inst., Basel, Switzerland, is spending three years at the Fac. Pharmacy, Univ. Sci. Technol., Omdurman, as from 25th of March 2016, financially supported by the Swiss Government.  

Dr. Mahmoud Hassan (Male) (M), Swiss Tropical & Public Health Inst., Basel, Switzerland, is spending three years at the F Fac. Pharmacy, Univ. Sci. Technol., Omdurman, as from January 2017, financially supported by the Swiss Government.  

Prof. Marcel Tanner (M), President of the Swiss Academy of Sciences (SCNAT) and Director, Swiss Tropical & Public Health Inst., gave a seminar presentation, "Global health challenges - responsibilities and chances of biomedical and public health scientists as partners in the pursuit of the sustainable development goals", Univ. Medical Sci. & Technol., Khartoum, Dec.  

Prof. Pascal Mäser (M), Head of Parasite Chemotherapy, Swiss Tropical and Public Institute, Basel, Switzerland gave a seminar presentation, "Antiprotozol agents - from magic bullet to magic pumb!", Faculty of Pharmacy, Univ. Khartoum, Dec.  


Sweden

Prof. Mohammad Shoeb (M) participated in a series of meeting in Stockholm and Kiruna on the topic of the future of industry, to discuss the importance of digital transformation, sustainable production and industrial skills enhancement within industry, 7-13 May. The visit was funded by the Swedish Institute.  

Dr. Jean Claude Ouédraogo (M) paid a visit to Dept. Pure and Applied Biochem., Chemistry Center, Lund Univ., 20 Feb. to 5 Mar., funded by STINT.  

Dr. Shimeles Admassie (M) visited and conducted research at IFM, Linköping Univ., June-Sep. The visit was funded by Prof Olle Inganäs's research grant.  

Mr. Daniel Umereweneza (M) and Dr. Theoneste Muhizi (M) visited Univ. Uppsala, Biomed. Ctr, to discuss about research collaboration, 30 Oct. - 4 Nov. Funded by ISP.  

Ms. Irene Atuko (F) had a research visit at Lund Univ., Feb.-July, in the lab. of Prof. Ola Wendt. The visit was funded by OPCW and SHE.  

Ms. Ruth Mbabazi (F) had a research visit to Lund Univ., Oct.-Nov., in the laboratory of Prof. Ola Wendt, the visit was funded by ISP.  

Ms. Fiona Nakibuule (F) had a three months fellowship at Lund Univ., Sep.-Nov., in the lab. of Prof. Ola Wendt. The visit was partially funded by ISP and OPCW.
Ouédraogo Désiré (M) paid a research visit to Stockholm Univ., 20 May-13 Aug.  
(IPMS BURK:01)

Dr. Japhet Niyobuhungiro (M) paid a research visit to Linkoping Univ. in June.  
(IPMS EAUMP)

Dr Ndango Marcel (M) paid a research visit to Stockholm Univ. in June.  
(IPMS EAUMP)

Prof. Michael J. Gatari (M) travelled for a scientific visit and PhD Thesis defense by Samuel Mwaniki Gaita, at Univ. Gothenburg, 23-30 Sep., funded by ISP.  
(IPPS KEN:01/2)

Two students, Mary Karanja (F) and Sophie Kipkwony (F) spent three months for discussing and planning their PhD project with the Swedish supervisor at the Dept. Earth Sciences, UU.  
(IPPS KEN05)

One PhD student, Gladys Kianji (F) spent one month at the Dept. Earth Sciences, Nov. – Dec., for continuing her PhD research work.  
(IPPS KEN05)

**Tanzania**

Mamadou Abdoul Diop (M) paid a research visit to AIMS-Tanzania, Bagamoyo, 20-24 Feb.  
(IPMS BURK:01)

B. Changwe (M) and F. Musonda (M), Univ. Zambia, participated in the 2nd MSSEESA Training Workshop in Instrumentation, Dar es Salaam, 11-12 Dec.  
(IPPS ZAM:01)

**Thailand**

Dr. Kesiny Phomkeona (F), Dr. Vanseng chounlamany (F), Dr. Santip Kongmany (M) and Dr. Phengxay Ddeeavanhxay (M) paid a visit to four Thai Universities (Chulalongkorn, Thammasat, AIT and Boulapha University), Thailand. 7-11 Mar., The visit was funded by Environmental Protection Fund, World Bank.  
(IPICS LAO:01)

Dr. Sounthone Singsoupho (M) and Ms. Sackxay Sompaserth (F) visited the Palaeomagnetic Lab at Geophysics Res. Ctr., Prince of Songkla Univ., for 20 days, to measure the anisotropy of the magnetic susceptibility using the Kappabridge KLY-3S of 150 samples.  
(IPPS LAOS:01)

Dr Maung Maung Soe (M) and Dr Min Soe Tun (M) visited King Mongkut’s Univ. Technol., Thonburi, 26 Nov. – 3 Dec. The visit was focused on training, research and collaborations activities.  
(IPPS MYA:01)

Dr Kalyar Thwe (F), Dr Win Win Maw (F), Dr Aung Mon Thet (M) and Dr Thet Thet Cho (F) made a study visit to Chiang Mai University, 12-21 December.  
(IPPS, MYA:01)

**Uganda**

Prof. Peter Nkedi-Kizza (M), Univ. Florida, USA, is a Fulbright fellow visiting Dept. Chem., Makerere Univ., Sep. 2017 to June 2018. Funded by Fulbright USA.  
(IPICS UGA:01)

Dr. Eika Guenther (M), Thüringer Landessternwarte Tautenburg Karl-Schwarzschild-Observatorium, Tautenburg, visited the group in Feb. to facilitate in astrophysics workshop for postgraduate students. The visit was funded by ISP.  
(IPPS UGA:02)
United Kingdom

Hamidou Toure, (M) research visit to Imperial Collège, London, 12-19 Mar.  
(IPMS BURK:01)

Dr. Al Mamun (M) visited Cambridge Univ. 16-25 Oct.  
(IPPS BAN:04)

Dr. A. Ayele (M) spent a research visit at the Univ. Southampton, 4-23 July.  
(IPPS ETH:02)

Prof. Michael J. G. Gatari (M) attended meetings to build broader research links on air pollution and transport between UoNBI and Leicester Univ., 19-24 June. The visit was funded by Newton Utafiti project fund.  
(IPPS KEN:01/2)

USA

Dr. Tatek Yergou (M) paid a research visit to Univ. Akron, Akron, OH, USA. The visit was funded by ISP.  
(IPPS ETH:01)

Zambia

Dr. Onesmus Munyati (M) gave an invited lecture and had a consultative meeting at the Copperbelt Univ. Funding from ISP.  
(IPICS ZAM:01)

Prof. Mmantsae Diale (F), Dept. Phys., Univ. Pretoria, South Africa, visited Dept. Chem., UNZA, three days for a research meeting. Funding from ISP.  
(IPICS ZAM:01)

Prof. Phenny Mwaanga (M), Ms. Maria Siame (F), and Ms. Lombe Mulenga (F), Copperbelt Univ., visited Dept. Chem., UNZA, three to five days. Funding from ISP.  
(IPICS ZAM:01)

The group organized a field trip to Lundazi, 1-4 July, with a number of students, academic and technical staff, plus the driver, and formed a team of 22 participants. On the way to Lundazi, the group had an opportunity to visit solar home systems in Nyimba, solar mini-grid in Sinda and finally a solar mini-grid in Lundazi.  
(IPPS ZAM:01)

Zimbabwe

Dr Hamisi Malebo (M) and Dr Samwel Mtulu, National Inst. Medical Research, Tanzania, visited 24-28 Oct. to review the TASHACK Herbal Medicine for the HIV Project.  
(IPICS ZIM:AbBST)

Dr P.V. Otomo (M), Univ. Free State, South Africa, visited the Ecotoxicology Research Group under the Dept. of Applied Biology and Biochemistry to train research group members on the ‘Single cell gel electrophoresis’ method and its applications. The visit was funded by the ISP grant.  
(IPICS ZIM:02)
# APPENDIX 5. ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>2D</td>
<td>two-dimensional</td>
</tr>
<tr>
<td>3D</td>
<td>three-dimensional</td>
</tr>
<tr>
<td>AAS</td>
<td>Atomic Absorption Spectroscopy/Spectrometer</td>
</tr>
<tr>
<td>AAU</td>
<td>Addis Ababa University (Addis Ababa, Ethiopia)</td>
</tr>
<tr>
<td>ABU</td>
<td>Al Baha University, Al Baha, Saudi Arabia</td>
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<tr>
<td>ACS</td>
<td>American Chemical Society</td>
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<tr>
<td>AECD</td>
<td>Atomic Energy Centre Dhaka (Bangladesh)</td>
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<tr>
<td>AFSIN</td>
<td>African Spectral Imaging Network</td>
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<tr>
<td>AGN</td>
<td>Active galactic nuclei</td>
</tr>
<tr>
<td>AiBST</td>
<td>African Institute of Biomedical Science and Technology, Harare, Zimbabwe</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrom</td>
</tr>
<tr>
<td>Alloc.</td>
<td>Allocation (of funding)</td>
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<tr>
<td>AMSEN</td>
<td>African Materials Science and Engineering Network</td>
</tr>
<tr>
<td>ANCAP</td>
<td>African Network for the Chemical Analysis of Pesticides</td>
</tr>
<tr>
<td>ANEC</td>
<td>African Network of Electroanalytical Chemists</td>
</tr>
<tr>
<td>ANFEC</td>
<td>Asian Network of Research on Food and Environment Contaminants</td>
</tr>
<tr>
<td>ANRAP</td>
<td>Asian Network of Research on Antidiabetic Plants</td>
</tr>
<tr>
<td>ANSOLE</td>
<td>African Network for Solar Energy</td>
</tr>
<tr>
<td>ARUA</td>
<td>African Research Universities Alliance</td>
</tr>
<tr>
<td>AS</td>
<td>Asia</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
</tr>
<tr>
<td>Assoc.</td>
<td>associate/association</td>
</tr>
<tr>
<td>BAN</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>BBF</td>
<td>Balance Brought Forward</td>
</tr>
<tr>
<td>BCF</td>
<td>Balance Carried Forward</td>
</tr>
<tr>
<td>BFO</td>
<td>BiFeO₃</td>
</tr>
<tr>
<td>Bil.Prg.</td>
<td>Bilateral Program</td>
</tr>
<tr>
<td>BIUST</td>
<td>Botswana International University of Science &amp; Technology</td>
</tr>
<tr>
<td>BMBF</td>
<td>German Federal Ministry of Education and Research</td>
</tr>
<tr>
<td>BMBSZ</td>
<td>Biochemistry and Molecular Biology Society of Zimbabwe</td>
</tr>
<tr>
<td>BMC</td>
<td>Biomedical Centre (at Uppsala University)</td>
</tr>
<tr>
<td>BUET</td>
<td>Bangladesh University of Engineering and Technology</td>
</tr>
<tr>
<td>BUF</td>
<td>Burkina Faso</td>
</tr>
<tr>
<td>BUHS</td>
<td>Bangladesh University of Health Sciences</td>
</tr>
<tr>
<td>BURK</td>
<td>Burkina Faso</td>
</tr>
<tr>
<td>BVP</td>
<td>Boundary Value Problems</td>
</tr>
<tr>
<td>CAB</td>
<td>Cambodia</td>
</tr>
<tr>
<td>CAM</td>
<td>Cambodia</td>
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<tr>
<td>CAMES</td>
<td>Conseil Africain et Malagache pour l’enseignement supérieur (African Council for Higher Education)</td>
</tr>
<tr>
<td>CARTA</td>
<td>Consortium for Advanced Research Training in Africa</td>
</tr>
<tr>
<td>CARS</td>
<td>Centre for Advanced Research in Sciences</td>
</tr>
<tr>
<td>CASEAN</td>
<td>Academic Conference on Natural Science for Young Scientists, Master and PhD Students from Asean Countries</td>
</tr>
<tr>
<td>CEMESTEA</td>
<td>Centre for Mathematics, Science Technology Education in Africa</td>
</tr>
<tr>
<td>CIMPA</td>
<td>Centre International de Mathématiques Pures et Appliquées</td>
</tr>
<tr>
<td>CIRAD</td>
<td>Centre de coopération International en Recherche Agronomique pour le Développement</td>
</tr>
<tr>
<td>Coll.</td>
<td>College</td>
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</tbody>
</table>

217
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>contrib.</td>
<td>contribution</td>
</tr>
<tr>
<td>CRNST</td>
<td>Centre National de la Recherche Scientifique et Technologique</td>
</tr>
<tr>
<td>CRSBAN</td>
<td>Centre de Recherche en Sciences Biologiques, Alimentaires et Nutritionnelles (University of Ouagadougou, Burkina Faso)</td>
</tr>
<tr>
<td>Ctr.</td>
<td>Centre/Center</td>
</tr>
<tr>
<td>CZTS</td>
<td>Copper-zink-tin sulfide ($\text{Cu}_2\text{ZnSnS}_4$)</td>
</tr>
<tr>
<td>DDT</td>
<td>Dichlorodiphenyltrichloroethane (persistent insecticide, banned by the UNEP Stockholm Convention)</td>
</tr>
<tr>
<td>Dept.</td>
<td>Department</td>
</tr>
<tr>
<td>Div.</td>
<td>Division</td>
</tr>
<tr>
<td>DNA</td>
<td>Deoxyribonucleic acid (carrier of genetic information)</td>
</tr>
<tr>
<td>DOI</td>
<td>Digital Object Identifier</td>
</tr>
<tr>
<td>DUTP</td>
<td>Dhaka University Telemedicine Programme (Bangladesh)</td>
</tr>
<tr>
<td>EAARN</td>
<td>East Africa Astronomy Research Network</td>
</tr>
<tr>
<td>EADN</td>
<td>Equatorial Africa Deposition Network</td>
</tr>
<tr>
<td>EAUMP</td>
<td>Eastern African Universities Mathematics Programme</td>
</tr>
<tr>
<td>EBA</td>
<td>Expertgruppen för Biståndsanaly (The Expert Group for Aid Studies, a Swedish Government Committee with the mandate to evaluate and analyse Sweden’s international development assistance)</td>
</tr>
<tr>
<td>EC</td>
<td>Executive Committee</td>
</tr>
<tr>
<td>ECG</td>
<td>Electrocardiography</td>
</tr>
<tr>
<td>Ed / Eds</td>
<td>editor / editors</td>
</tr>
<tr>
<td>EDXRF</td>
<td>energy-dispersive-X-ray-fluorescence</td>
</tr>
<tr>
<td>EHDA</td>
<td>electrohydrodynamic atomization</td>
</tr>
<tr>
<td>Engineer.</td>
<td>Engineering</td>
</tr>
<tr>
<td>EPS</td>
<td>European Physical Society</td>
</tr>
<tr>
<td>ERC</td>
<td>ENERGY REGULATORY COMMISSION</td>
</tr>
<tr>
<td>ERT</td>
<td>Electrical resistivity tomography</td>
</tr>
<tr>
<td>ESARSWG</td>
<td>Eastern and Southern Africa Regional Seismological Working Group</td>
</tr>
<tr>
<td>ETH</td>
<td>Ethiopia</td>
</tr>
<tr>
<td>EUR</td>
<td>Europe</td>
</tr>
<tr>
<td>EXCEED</td>
<td>Excellence Centre for Development Cooperation</td>
</tr>
<tr>
<td>F</td>
<td>Female</td>
</tr>
<tr>
<td>F.</td>
<td>Faso</td>
</tr>
<tr>
<td>Fac.</td>
<td>Faculty</td>
</tr>
<tr>
<td>FBI</td>
<td>Fourier-Bros-lagolnitzer</td>
</tr>
<tr>
<td>FAO</td>
<td>The Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>FASBMB</td>
<td>Federation of African Societies of Biochemistry and Molecular Biology</td>
</tr>
<tr>
<td>FASC</td>
<td>Federation of African Societies of Chemistry</td>
</tr>
<tr>
<td>FC</td>
<td>(Swedish) Focus Country</td>
</tr>
<tr>
<td>FS</td>
<td>Författningssamling (Swedish Government’s Statute-book)</td>
</tr>
<tr>
<td>FUF</td>
<td>Swedish Development Forum (Föreningen för utvecklingsfrågor)</td>
</tr>
<tr>
<td>GC</td>
<td>Gas chromatograph or Gas chromatography</td>
</tr>
<tr>
<td>GC-MS</td>
<td>Gas chromatography linked with mass spectrometry</td>
</tr>
<tr>
<td>GC/MS</td>
<td>Gas chromatography linked with mass spectrometry</td>
</tr>
<tr>
<td>GIZ</td>
<td>Deutsche Gesellschaft für Internationale Zusammenarbeit (the German Federal Enterprise for International Cooperation)</td>
</tr>
<tr>
<td>HEQEP</td>
<td>Higher Education Quality Enhancement Project for Bangladesh</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HPLC</td>
<td>High Performance Liquid Chromatography</td>
</tr>
<tr>
<td>IAEA</td>
<td>International Atomic Energy Agency</td>
</tr>
<tr>
<td>IAS</td>
<td>Institute of Advanced Studies (at the Nanyang Technological University, Singapore)</td>
</tr>
<tr>
<td>IASPEI</td>
<td>International Association of Seismology and Physics of the Earth’s Interior</td>
</tr>
</tbody>
</table>
MUST  Mbarara University of Science and Technology, Mbarara, Uganda
MYA  Myanmar
N.Am.  North America
N/A  Not Applicable, or Not Available
NABSA  Network for Analytical and Bioassay Services in Africa
NADMICA  Nature Induced Disaster Mitigation in Central America
NAPRECA  Natural Products Research Network for Eastern and Central Africa
NAT  National/Local
NAT  Natural
NCRD  Norwegian Centre for Research Data
NCZFO  Ni_{10.6}Co_{0.4}Zn_{0.4}Fe_{2}O_{4}
NITA  National Industrial Training Authority (Kenya)
NITUB  Network of Instrument Technical Personnel and User Scientists of Bangladesh
NGO  Non Government Organisation
NMR  Nuclear Magnetic Resonance
NTDs  Neglected Tropical Diseases
NUOL  National University of Laos (Vientiane, Laos)
NUST  National University of Science and Technology, Bulawayo, Zimbabwe
NW  Scientific Network(s)
O  Oral (conference contribution)
OPCW  Organisation for the Prohibition of Chemical Weapons
OPV  Organic Photo Voltaics
P  Poster (conference contribution)
P3HT  poly(3-hexylthiophene)
PACN  Pan Africa Chemistry Network
PAMO  Pan African Math Olympiad
Part.  partial
part.  participants
PCBs  Polychlorinated Biphenyls (banned industrial chemical)
PCBM  phenyl-C_{61}-butyric acid methyl ester
PDE  Partial Differential Equations
PEDOT: PSS  poly(3,4-ethylenedioxythiophene)poly(styrene sulfonate
PDR  People's Democratic Republic
PhD  Doctor of Philosophy
Phys.  Physical
PIC  Programme Interuniversitaire Ciblé (Belgian support cooperation program)
POPs  Persistent Organic Pollutants
Prof.  Professor
Publ.  Publication(s)
PV  Photovoltaic
RABiotech  West African Biotechnology Network
RARSUS  Risk Assessment and Reduction Strategies for Sustainable Urban Resource Supply in Sub-Saharan Africa
RBM  Results Based Management
RECETOX  Research Centre for Toxic Compounds in the Environment
REG  Regional
Res.  Research
RG  Research Group(s)
ROPE  Real Time Outcome Planning and Evaluation
RSA  Republic of South Africa
RUPP  Royal University of Phnom Penh (Phnom Penh, Cambodia)
RWA  Rwanda
S.Am.  South America
SAMSA  Southern Africa Mathematical Sciences Association
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SANORD</td>
<td>Southern African – Nordic Centre</td>
</tr>
<tr>
<td>sandw.</td>
<td>sandwich (training program)</td>
</tr>
<tr>
<td>SASA</td>
<td>Society for Advancement of Science in Africa</td>
</tr>
<tr>
<td>Sci.</td>
<td>Science</td>
</tr>
<tr>
<td>SEAMaN</td>
<td>South East Asia Mathematics Network</td>
</tr>
<tr>
<td>SEANAC</td>
<td>Southern and Eastern Africa Network for Analytical Chemists</td>
</tr>
<tr>
<td>Sect.</td>
<td>Section</td>
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<tr>
<td>SEK</td>
<td>Swedish Crowns (currency)</td>
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<tr>
<td>SFS</td>
<td>Svensk Författningssamling (Swedish Government’s Statute-book)</td>
</tr>
<tr>
<td>Sida</td>
<td>Swedish International Development Cooperation Agency</td>
</tr>
<tr>
<td>SILAR</td>
<td>Successive ionic layer adsorption and reaction</td>
</tr>
<tr>
<td>SLU</td>
<td>Sveriges Lantbruksuniversitet (Swedish University of Agricultural Sciences)</td>
</tr>
<tr>
<td>SQ3</td>
<td>squarylium dye III</td>
</tr>
<tr>
<td>STEM</td>
<td>Science Technology, Engineering and Mathematics</td>
</tr>
<tr>
<td>SU</td>
<td>Stockholm University, Stockholm, Sweden</td>
</tr>
<tr>
<td>SWH</td>
<td>Sandwich (training)</td>
</tr>
<tr>
<td>SWINDON</td>
<td>Sustainable Water Management in Developing Countries</td>
</tr>
<tr>
<td>TDA</td>
<td>thermo-dilatometric analysis</td>
</tr>
<tr>
<td>TGA</td>
<td>thermo-gravimetric analysis</td>
</tr>
<tr>
<td>TH</td>
<td>Technische Hochshule (Technical University)</td>
</tr>
<tr>
<td>TICA</td>
<td>Thailand International Development Cooperation Agency</td>
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<td>Tot.</td>
<td>Total</td>
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<td>TR</td>
<td>Thomson Reuters</td>
</tr>
<tr>
<td>TRF</td>
<td>Thailand Research Fund</td>
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<td>TCS</td>
<td>Tanzania Chemical Society</td>
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<td>TWAS</td>
<td>The World Academy of Sciences</td>
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<td>TXRF</td>
<td>Total Reflection X-Ray Fluorescence</td>
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<td>UDSM</td>
<td>University of Dar es Salaam (Dar es Salaam, Tanzania)</td>
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<td>UGA</td>
<td>Uganda</td>
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<td>UGC</td>
<td>University Grants Commission</td>
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<td>UHÄ</td>
<td>(formerly) Universitets- och högskoleämbetet (Office of Universities and</td>
</tr>
<tr>
<td></td>
<td>Higher Education, Sweden)</td>
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<tr>
<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
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<tr>
<td>UNEP</td>
<td>United Nations Environmental Program</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
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<td>Univ.</td>
<td>University</td>
</tr>
<tr>
<td>UO1 Pr JKZ</td>
<td>University OUAGA I Professor Joseph KI-ZERBO</td>
</tr>
<tr>
<td>UoNBI</td>
<td>University of Nairobi, Nairobi, Kenya</td>
</tr>
<tr>
<td>UR</td>
<td>University of Rwanda</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USD</td>
<td>United States Dollars (currency)</td>
</tr>
<tr>
<td>USFX</td>
<td>Universidad de San Francisco Xavier de Chuquisaca, Sucre, Bolivia</td>
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<tr>
<td>USTTB</td>
<td>Université des Sciences, des Techniques et des Technologies de Bamako, Mali</td>
</tr>
<tr>
<td>UU</td>
<td>Uppsala University, Uppsala, Sweden</td>
</tr>
<tr>
<td>UV</td>
<td>ultraviolet</td>
</tr>
<tr>
<td>UZ</td>
<td>University of Zimbabwe</td>
</tr>
<tr>
<td>w/o</td>
<td>without</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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<td>WIOMSA</td>
<td>Western Indian Ocean Marine Science Association</td>
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<td>Zimbabwe</td>
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221