

## **Experts in Mathematics emphasize the need to create sustainable networks to Strengthen Research in Universities**

Experts in mathematics have emphasized the need to create sustainable groups and networks to strengthen Research in Universities. This was at the opening ceremony of the 3<sup>rd</sup> Network Meeting for Sida and ISP-Funded PhD Students and Postdocs in Mathematics; held on Monday 20<sup>th</sup> August 2018 at Imperial Botanical Beach Hotel Entebbe, Uganda. The meeting was officially opened by the Vice Chancellor of Makerere University Prof. Barnabas Nawangwe represented by the Director of Research and Graduate Training Prof. Mukadasi Buyinza.

The 3<sup>rd</sup> Network Meeting for Sida and International Science Programme (ISP) funded PhD Students and Postdocs in mathematics brought together over 100 PhD students and Postdoctoral fellows in Mathematics from African partner universities; supervisors and mentors; senior researchers; and coordinators from the Sida bilateral programs, ISP core program and Swedish senior researchers with the aim of strengthening and encouraging collaborative research in Mathematics. The Meeting will run from 20<sup>th</sup> -24<sup>th</sup> August 2018 under a theme: ***Strengthening Research in Mathematics in Universities with Sida and ISP Support.***

According to the Chairperson of the Local Organizing Committee Prof. John Mango, the five days' workshop brings together participants from Benin, Burkina Faso, Cameroon, Ethiopia, Finland, German, Kenya, Madagascar, Mozambique, Myanmar, Rwanda, Sudan, Sweden, Tanzania, Uganda and Zambia. Participants will lay a strategy and develop research agendas on effective and efficient joint publication; and joint applications for research funding. "I am happy to report on the training of 21 staff members at Makerere, Busitema, Gulu, Mbarara and Kyambogo at the Doctoral level in mathematics and the training of 9 Postdocs. This is clearly a bumper harvest from the Swedish support to Mathematics in our country" he said.

Prof. Mango reiterated that the network of researchers as a platform also provides a forum for interaction of PhD, Postdoc students and researchers in mathematics supported by Sida and ISP; with a view of sharing experiences and creating sustainable research groups and networks.

The Principal of the College of Natural Sciences Prof. J.Y.T Mugisha appreciated the Government of Sweden for the support it extends to public universities in Uganda. The Principal also thanked the organizing committee as well as the funders of the meeting for ensuring that the event is successful. Prof. Mugisha noted that this is a great opportunity for networking and collaborating for the researchers attending the meeting. 'It is rare to have all the senior scientists in one place and thus the young researchers should use this meeting to start work with the seniors present here'. He further welcomed the participants to Uganda and wished them a peaceful stay in Uganda.

In a speech read by Prof. Mukadasi Buyinza, the Vice Chancellor of Makerere University Prof. Barnabas Nawangwe, commended the great work of the Swedish International Development Cooperation Agency (Sida) in promoting collaborations in mathematics between universities in Eastern and Southern Africa.

"Such collaborations will involve joint publications, joint applications for funding, sharing of human resources for teaching and supervision, and joint arrangements of conferences and workshops. These efforts are key for a continued sustainable development of mathematics in Eastern and Southern Africa," he said.

Prof. Nawangwe urged mathematicians in their research groups to carry out research dissemination and translation of outputs into policy briefs when he said, "I know that in applied mathematics and mathematical statistics, researchers collect plenty of raw data, but many times these are not translated or transformed into desired outcomes to be able to serve the reasons for which they are gathered. I therefore urge you to direct your research in areas relevant to your national development goals in order for mathematics to play the role it without any doubt should."

He acknowledged the support of the Swedish government to Makerere University that has been monumental and critical to the realization of the University's core functions of teaching and learning, research and innovations, and partnerships and networking.

"The support has also greatly improved the research culture in mathematics at Makerere University with an increase of publications in recognized international journals and active participation in international conferences. In the past two decades we have built capacity on PhD, Postdocs and masters level. Therefore, doing research together we will achieve more, help us in laying the strategies and develop research agendas at national and regional levels," he said.

Prof. Mango as Chairperson Local Organising committee was commended for bringing the event to Uganda and Makerere University in particular. The 1<sup>st</sup> and 2<sup>nd</sup> network meetings were held in Sweden. Prof Mango has spearheaded many development initiatives in the Mathematics Department in the past two decades. These initiatives have seen many staff in the department trained to PhD and Postdoc levels in Uganda and the region.

Prof. Mango commended the following members of the Organising Committee for their selfless service: Prof Kasozi Juma-Makerere University, Dr Silvester Rugeihyamu-University of Dar es salaam, Dr Tembo Isaac-University of Zambia, Dr Minani-University of Rwanda, Dr Eunice Mureithi-University of Dar es salaam, Dr Betty Nannyonga-Makerere University, Dr Mirumbe Ismail-Makerere University and Dr Ssevviiri David-Makerere University.

Highlighting the importance of mathematics in solving societal challenges, Prof. Leif Abrahamsson Director of Mathematical Sciences at ISP said mathematics is an imperative tool that drives all other science subject. Prof. Leif also mentioned that Mathematics is so helpful in solving societal problems.

"Its functions might be hidden but we need mathematics to solve societal problems. You will find mathematics in financial institutions, political sectors, business entities and also in the health sector. We have on several occasion used mathematics to find solutions to some of the epidemic diseases such as Ebola and HIV/AIDS," he stated.

Prof. Bengt Ove Turesson, from Linköping University-Sweden; Department of Mathematics (MAI), emphasized the need to provide career guidance when training mathematics in schools. "Questions like what am I going to do after studying mathematics should be clearly answered during the career guidance sessions so that a student understands some of the opportunities available when he or she studies the mathematics. We should also encourage the construction of resource centres for teachers at various education levels where mathematics teachers will come together and discuss the several ways of improving mathematics," he mentioned.

The Head, Department of Mathematics at Makerere University Dr. David Ssevviiri, described mathematics as a language of basic sciences “It is a language for engineers and all science based fields. We should interest the learners when teaching it,” he said.

Dr. Betty Nanyonga Kivumbi said that she is one of the three lucky female lecturers at the Department of Mathematics, Makerere University. She therefore, cited the need to empower and mentor girls to have equal access to and success in mathematics “As a department of Mathematics at Makerere University we felt it needful to engage in outreach programs such as visiting schools and talk to girls and teachers, we have organized the mathematics marathon and we started a regional network to promote basic sciences,” Dr. Nanyonga explained.

Ms Ritah Namisango, the Principal Public Relations Officer of Makerere University appealed to the mathematicians to come up with strategies aimed at popularizing mathematics at all levels. “Mathematics is a vital subject, but a number of interactions with pupils and students indicate that most of them fear the subject. I am happy to note that we have over 100 participants from Africa and Europe in this room. I appeal to you to come up with innovative ways of making mathematics attractive,” remarked Ms Namisango.

In East Africa, Sida has supported mathematics since 2007 through bilateral programmes in Rwanda, Uganda, Mozambique, Ethiopia and Tanzania. The support is mainly for capacity building at PhD and Postdoc levels. ISP support in mathematics started almost two decades ago with the aim of building capacity and improving on the state of mathematics in Uganda, Kenya, Rwanda, Tanzania and Zambia.