

WIMEA-ICT

Improving Weather Information Management in East Africa for effective service provision through the application of Suitable ICTs - Newsletter

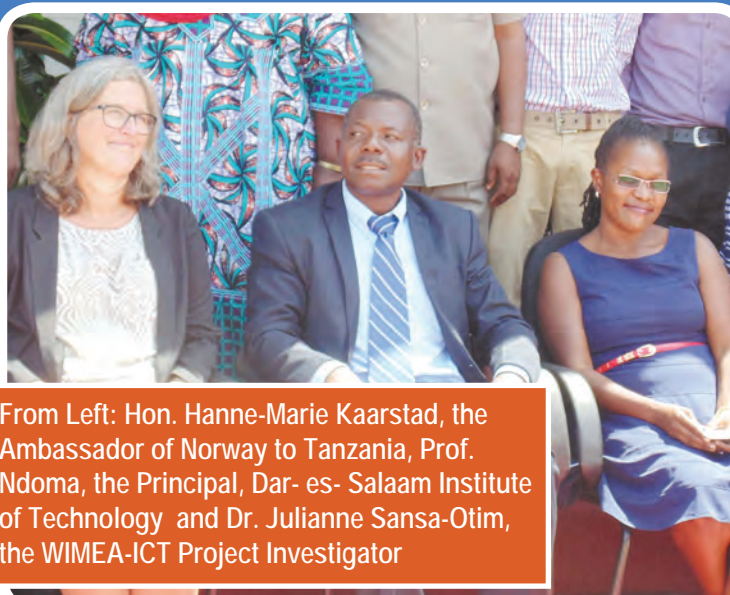
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KARIBU

NORWEGIAN AMBASSADOR WELCOMES WIMEA-ICT TO TANZANIA FOR THE PROJECT'S FOURTH AGM

Hon. Marie Kaarstad (Ambassador of Norway to Tanzania) graced the fourth Annual General Meeting (AGM) of the WIMEA-ICT Project that was held in Tanzania. She welcomed the WIMEA-ICT team from the University of Bergen, Makerere University and University of Juba to Tanzania.

Dar es Salaam Institute of Technology (DIT) in Tanzania



From Left: Hon. Hanne-Marie Kaarstad, the Ambassador of Norway to Tanzania, Prof. Ndoma, the Principal, Dar-es-Salaam Institute of Technology and Dr. Julianne Sansa-Otim, the WIMEA-ICT Project Investigator

hosted this meeting from October 24-28, 2016.

"Norwegian Development is vital for developing and developed countries," Hon.

Kaarstad said. "WIMEA-ICT is one of the projects sponsored by NORHED in Tanzania and I believe that weather knowledge generation is vital across boundaries both geographical,

ethnical, and economical for developing and developed countries," she said.

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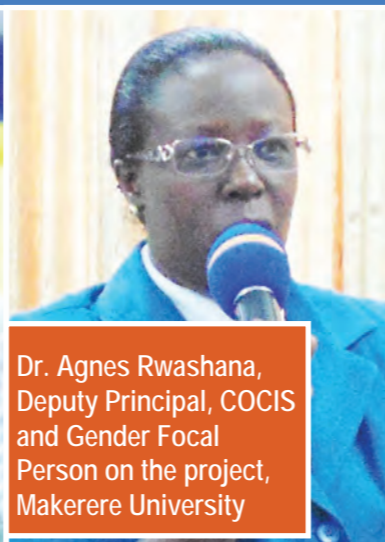
Dora Bampangana, Administrator on the WIMEA-ICT Project at Makerere University



Anne Wetlsen, Norad representative from Norway



A journalist from one of the media houses in Tanzania



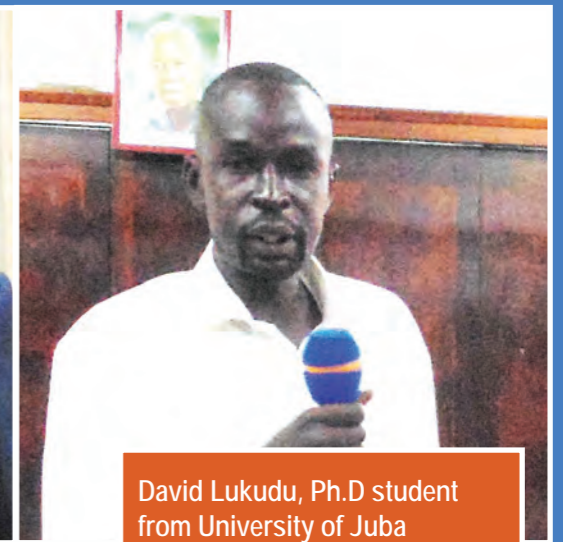
Dr. Agnes Rwashana, Deputy Principal, COCIS and Gender Focal Person on the project, Makerere University



Dr. Julianne Sansa-Otim, WIMEA-ICT project Investigator, Makerere University



Khemis Ben, WIMEA-ICT project Coordinator at University of Juba



David Lukudu, Ph.D student from University of Juba

Professor Ndoma, the Principal at DIT, recognised Hon. Kaarstad for extending support to their country.

He also recognised the Chancellor of DIT, guests from the University of Bergen, Makerere University and the University of Juba.

He welcomed and appreciated the commitment demonstrated by international participants who travelled all the way to Tanzania.

He acknowledged the Principal Investigator of the project, Dr. Julianne Sansa Otim from Makerere University and all the WIMEA-ICT participants from the partner institutions.

“WIMEA-ICT is one of the initiatives at DIT, besides many others,” Prof. Ndoma said.

He advocated for a strong weather information dissemination policy, saying that DIT welcomes any initiatives on policy matters.

He further added that although the project ends in 2018/19, the university will continue to support its outputs because sustainability is critical.

This meeting was attended by various participants that included, the Deputy Principal of DIT, Counsellor of Norwegian Embassy and Farmer groups in Tanzania.

In his vote of

thanks, the Deputy Principal, Professor Christian Nyahuma, expressed gratitude to the embassy of Norway in Tanzania for supporting WIMEA.

“I hope that this workshop will be a good platform

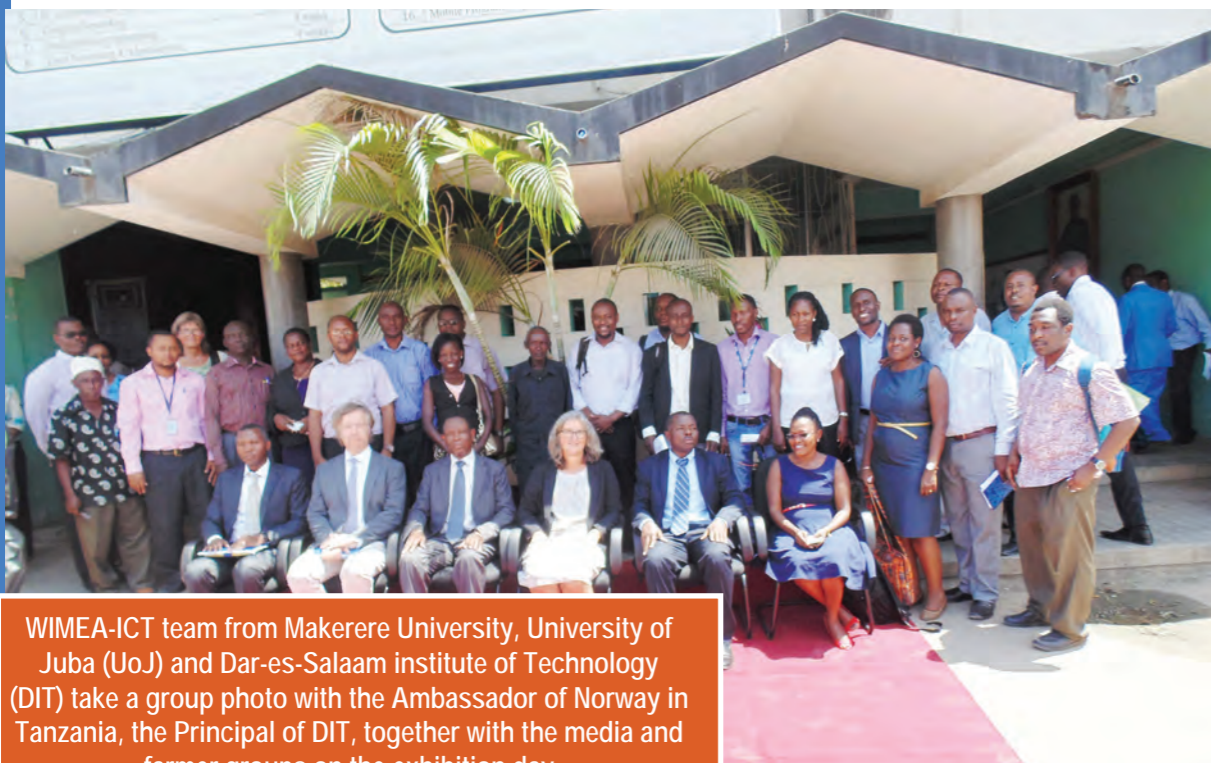
for the success of the project and cement our friendship,” he said.

Dr. Julianne Sansa Otim told participants that the project works mainly to build capacity within the higher education institutions as well as improving infrastructure for weather information.

Furthermore, that this project has a total of eight Ph.D students and nine supporting Masters students.

It was also noted that the WIMEA-ICT project is organised into four research components with, Research Component 1 being the most represented with Ph.D students from Makerere, DIT and UoJ and each of these is assisting in developing a weather prediction

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WIMEA-ICT team from Makerere University, University of Juba (UoJ) and Dar-es-Salaam Institute of Technology (DIT) take a group photo with the Ambassador of Norway in Tanzania, the Principal of DIT, together with the media and farmer groups on the exhibition day



Maximus Byamukama (Ph.D student on the project) explains how the sensors work at the weather station at the DIT during the exhibition



Ben Salibaa Lagure, the WIMEA-ICT Administrator from the University of Juba introducing himself



Some of the Ph.D students, together with the WIMEA-ICT supervisor Prof. Charles Basalirwa and the Accountant, Peter Kaamu

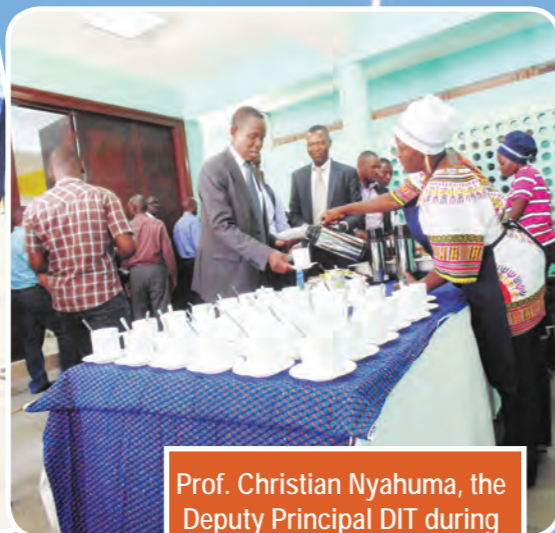


Ben Khemis interacts with one of the exhibitors at the Institute

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The skeleton displayed at the exhibition



Prof. Christian Nyahuma, the Deputy Principal DIT during tea break



Dr. Benjamin Kanagwa making his contribution during the meeting



Dr. Amos Nungu, the WIMEA-ICT Project Coordinator at DIT giving highlights of the project's achievements



Hon. Hanne-Marie Kaarstad, and fellow colleagues during tea break



Julianne Sansa-Otim chairing on one of the sessions

model for the partner countries.

The gender distribution on scholarships is 25% females for masters (two female, six male) and 38% females for Ph.D students (three female, five male).

The WIMEA-ICT Project Coordinator in Tanzania, Dr. Amos Nungu, informed the participants that some of the project achievements at the Institute included the development of the Weather Data Repository (WDR) and a Weather Information Dissemination System (WIDS).

They also finished the digitisation of the weather records at Tanzania Meteorology Agency and started a Masters in Computational Science and Engineering course.

They have developed four professional courses for meteorology staff engineers. It was also noted that DIT participated in the Weather Research and Forecast (WRF) training at the University of Bergen, and is participating in the Automatic Weather Station design and prototyping of the second generation.

The project will be testing these 70 AWS (Automatic Weather Stations) with the stakeholders such as farmers and fishermen.

The meeting's objective were to discuss the Ph.D

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EDITORIAL



Happy New Year folks...

Greetings from the WIMEA-ICT project where we have started off 2017 with focused attention on delivering weather information infrastructure i.e hardware and software applications.

In this issue, we bring you highlights of the annual project meeting held in Dar-es-Salaam and experiences in the focus group discussions held with the farmers as we design the weather information dissemination system. We also bring you experiences during the installation of Generation 2 Automatic Weather Station in Juba.

In a bid to accelerate the progress of the Ph.D students, monthly progress meetings have been held since November 2016. We also share the students' feedback about these meetings and one of the Ph.D student's study visit to Bergen in November 2016.

Happy reading and best wishes in our endeavours during 2017.

*Dr. Julianne Sansa-Otim (Ph.D)
Project Principal Investigator*

students' progress, highlight the 2015/16 project achievements, agree on the 2016-17 and 2018-19 project plan and deal with any issues of special concern. The meeting was to also agree on mitigation of risks and harmonise the projects' proposals to NORAD.

The NORAD team was represented by Ms. Anne Wetlsen, who appreciated the submitted reports, the work on communication, gender and other activities. She also informed participants that NORAD appreciated the relations established with the meteorology authorities in the respective partner countries.

Members agreed to have the Ph.D monthly progress meetings for Ph.D students with their supervisors, as a means of improving Ph.D student progress.

Discussions with the meteorological authorities on where the AWS installations should be made will also be held. The meeting was wrapped up with a dinner at Holiday Inn Hotel.



Prof. Charles Basalirwa,
Researcher at Makerere
University



Triphonia Ngailo (Ph.D student
under Research Component 1)
from DIT makes her presentation

Isaac Mugume (Ph.D student
under Research Component 1)
from Makerere University, makes
his presentation



Ph.D students during one of the sessions;-
Doreen Tuheirwe-Mukasa, Triphonia Ngailo
and Isaac Mugume



Prof. Christian Nyahuma
makes his appreciation
remarks



Daudi Mboma, WIMEA-
ICT Accountant at DIT
introducing himself

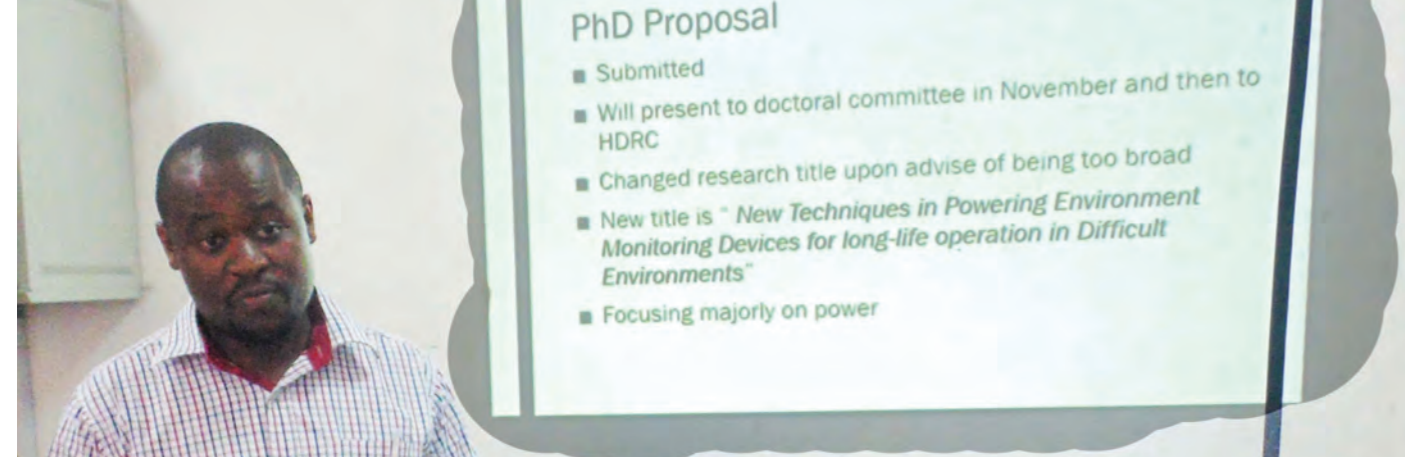


Dr. Roseline N. Akol,
Ph.D supervisor from
Makerere University



Edwin Rutalebwa, WIMEA-
ICT Administrator at DIT
makes introduced himself
at the meeting

Thank you WIMEA, for the Ph.D monthly progress meetings - Maximus



Ph.D student, Maximus Byamukama discusses his progress before his supervisors

PhD Proposal

- Submitted
- Will present to doctoral committee in November and then to HDRC
- Changed research title upon advise of being too broad
- New title is "New Techniques in Powering Environment Monitoring Devices for long-life operation in Difficult Environments"
- Focusing majorly on power

PhD progress on the WIMEA-ICT project is very critical, as it is one of the outcomes expected when the project ends in 2018. To this end, some interventions have been put in place to ensure this happens.

It was agreed during the 2016 annual meeting in Tanzania, that monthly progress meetings will be held. All PhD students will meet with their supervisors to assess and review the performance of each student against their plans of the previous month. They will also refine new plans for the following

month.

Two meetings have been held so far. The first one took place on November 30 and the other on December 31 at Kolping Hotel in Bwaise a Kampala suburb.

"I am grateful to WIMEA for the monthly meetings because they are helping me to progress on my PhD work", said Mr. Maximus Byamukama, a PhD student under Research Component 3.

The supervisors have also come to realise and appreciate their students' achievements and offer solutions on challenges and weakness identified with the students work.

The next meeting will take place on the 25th January, 2017 at Makerere University.



The pretest focus group discussion with women farmers in Mpelerwe

WEATHER INFORMATION DISSEMINATION SYSTEM PRE-TESTING KICKS OFF

On December 21, 2016, the Research Component 4 team moderated by Doreen Tuheirwe-Mukasa a PhD student, carried out a pretest focus group discussion session with women farmers from Ssekatti zone, in Mpelerwe, Kampala. The session took place at Mrs. Deborah Gitta's home. Mrs. Gitta is the leader of this group.

The audience was composed of a farmer group of 12 women, ranging from the ages of 15-25 and above 46. This group was chosen

because of its proximity to the Kampala region, and therefore the pretest informed the adjustment of the data collection instrument which will be used with other farmers in the targeted districts of Rakai and Mbale.

Some of the observations made

during the pretest included: the farmers participate in both crop production and livestock rearing on a small scale. Some women hire the land on which they carry out agricultural activities. They keep animals waste that is later used as fertilisers for their crops. They depend on their own knowledge of seasons to make decisions for these agricultural activities. More focus group discussions are to be done in Rakai and Mbale districts. Data collected from these farmers will be used as input for developing the requirements of a weather information dissemination system in Uganda.





From left: Doreen Tuheirwe-Mukasa with Prof Dines, Masters' student at the faculty and Prof Magne



Domain engineering is important to my Ph.D

Doreen Tuheirwe-Mukasa, a PhD student participated in a one week long winter course on Domain Engineering lectured by Prof. Dines Bjørner from the Department

of Mathematics and Computer Science, Technical University of Denmark at VilVite auditorium, University of Bergen from November 7 -11, 2016.

Professor Bjørner is a Danish computer scientist. To read more

about his lectures, please log onto [athttp://www.imm.dtu.dk/~dibj/2016/bergen/](http://www.imm.dtu.dk/~dibj/2016/bergen/). The class comprised of students from the University of Bergen who are following the Program Specification course, Professor Magne (one of the PhD advisors), and some faculty members from the Department of Informatics, and the Geophysical Institute (GFI) at

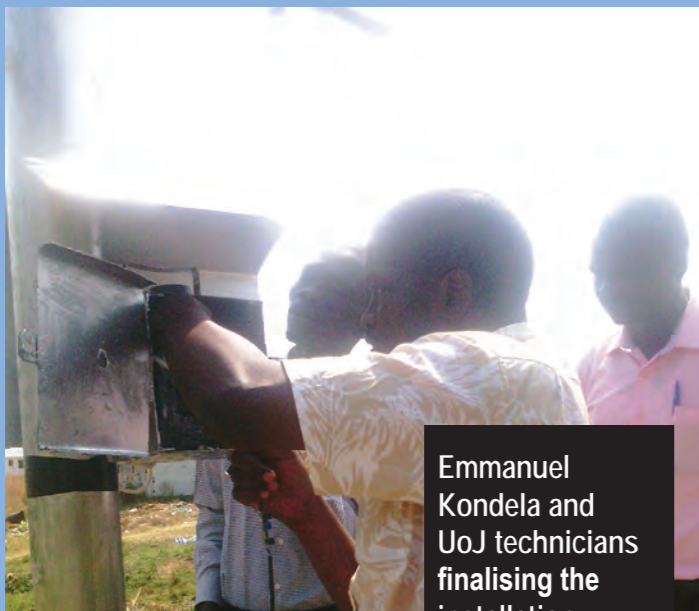
the University of Bergen. GFI houses the WIMEA-ICT project as the Norwegian partner institution.

"This domain engineering lecture was very helpful and educative because it is of importance to my PhD project as I demonstrate how to extend and apply it to improving weather information dissemination," Tuheirwe said.

Second Generation Automatic Weather Station Prototype installed at University of Juba



Mary Nsabagwa, Emmanuel Kondela and UoJ technician celebrating the successful installation of the Generation 2 Automatic Weather Station at the University of Juba



Emmanuel Kondela and UoJ technicians finalising the installation

Mary Nsabagwa and Emmanuel Kondela, Ph.D students on the WIMEA-ICT project visited University of Juba to install the second generation Automatic Weather Station (AWS) Prototype from December 15 -19, 2016.

The activities performed during this visit included: finalising the AWS stand, installing nodes on the stand, designing the ground node power supply, configuring gateway and setting up the power supply. They also set up Internet connection, monitoring the AWS performance, writing AWS manual and training users.

These activities were performed by a team of the WIMEA-ICT (RC3) students, Khemis Ben (the UoJ project coordinator), other project administrators, technicians, and metal fabricators.

Some of the challenges faced were; unavailability of power, lack of computers for the technicians who maintain the AWS, very slow Internet speed and insufficient training time.

The suggested recommendations for the challenges were: have Automatic Weather Station distributed with the required software packages since Internet is poor, create more time to train users on how to maintain these stations, acquire equipment like raspberry pi for the maintainers to practice while at the stations, and acquire a computer for the team for monitoring purposes.

On a positive note, Juba city was peaceful during the visit.



UoJ team led by Khemis Ben, the WIMEA-ICT UoJ coordinator and Emmanuel Kondela, an RC3 Ph.D student installing Gen2 Automatic Weather Station at the University of Juba



MAKERERE
UNIVERSITY



Norad

WIMEA-ICT: Improving **W**eather **I**nformation **M**anagement in **E**ast **A**frica for effective service provision through the application of suitable **ICTs**

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