

# WIMEA-ICT

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

ISSUE 008- OCT, 2016

## MAKERERE UNIVERSITY AWARDS FOUR MASTERS SCHOLARSHIPS

The WIMEA-ICT project made a call on the advert for Masters scholarships on June 20, 2016, on the project website (wimea@mak.ac.ug) to invite applicants from different colleges. Over 15 applications were received and four were selected for the suitability and capacity to support different research components. We spoke to our successful candidates.

### OPIO RONALD: RESEARCH COMPONENT 1

**QUESTION:** What drew your interest to apply for a scholarship under the WIMEA-ICT project?

**ANSWER:** I received a call for applications and took keen interest because it was weather-related. Looking at the low accuracy of data caused by the available systems in my country, I realised that this would be a golden opportunity for me to

get involved so as to improve the prevailing situation. In addition, I also read that the project was in partnership with UNMA, which I have always found interesting to interact with.

**Q:** How do you think your Masters project will benefit the PhD student and yourself?

**A:** My Masters project will be centered on building a weather

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(From page 1)

research forecast model for partners and through activities like comparing the performance of weather models to prediction results is one of the greatest benefits I hope to deliver.

Personally, having studied Geography at high school, I look at this scholarship as very helpful in terms of adding more value to me through the different

activities that I shall engage in and for career advancement.

**Q:** How do you plan to achieve the goal of finalising within two years?

**A:** I plan to work in collaboration with a PhD student, Mr. Isaac Mugume, to ensure timely implementations by setting deadlines for each task

and also having work sessions to assist him as my supervisor.

**Q:** Any remarks to the WIMEA-ICT Team?

**A:** I appreciate the WIMEA-ICT project for offering me the opportunity to study on scholarship, and I am ready to be a team player to achieve our results in a timely manner.

## MARTHA NAKUWANDA: RESEARCH COMPONENT 2

**QUESTION:** Could you please briefly talk about yourself?

**ANSWER:** I am Martha Nakuwanda, graduate of Software Engineering and I like helping people.

**Q:** What interested you to apply for the scholarship under the WIMEA-ICT project?

**A:** I wanted to study while still young and also gain a different experience and exposure from the financial to weather environment. I believe it all tallies with my desire to help people.

**Q:** How do you think your Masters project will benefit the PhD student and yourself?

**A:** I was very good at programming during my undergraduate study here at Makerere University. In addition, I have worked in developing financial systems for banks and I have been an intern under this project. In a nutshell, I will be offering technical support mainly on the web application of the Data Repository. I will assist in developing a system that can help meteorological data analysts to have their data in one centre, thus making it more accessible to the people that need it.

**Q:** What are the achievements you look forward to during and after your two-year study?

**A:** To assist my supervisor, Andrew Mwesigwa, who is a PhD student, to have a globally recognised



system in place that can also be open-sourced for other countries. I believe finishing this study will qualify me to be a software engineer.

**Q:** What would you like to say to the WIMEA-ICT Team?

**A:** I thank the WIMEA-ICT project for granting me the chance to give back to my community through this scholarship, where I can develop a system that will be very helpful in addressing many weather-related issues.

## KAGGWA ANDREW: RESEARCH COMPONENT 4



**QUESTION:** Who is Andrew Kaggwa?

**ANSWER:** He is a male who graduated in 2014 with a degree in Software Engineering from Makerere University. He is sociable, hardworking and very interested in finishing his Masters degree because it gives him more capabilities and opportunities.

**Q:** What interested you to apply for the scholarship under the WIMEA-ICT project?

**A:** I had earlier been interested in pursuing a Masters degree but because of the busy work schedule and financial constraints, it was impossible to take it on. But when I received a call for the scholarship, I grabbed it with both hands.

**Q:** What are your targets during and after your study?

**A:** Finishing this degree is the priority. Together with Doreen Tuherwe, my supervisor, I look forward to meeting with various stakeholders to understand their needs and design a system that will match their requirements and needs.

**Q:** Do you have any expectations from the WIMEA-ICT Project?

**A:** Yes, I do. I expect support for the research I shall be involved in and also guidance from my supervisor on how to meet the targets in a timely manner.

# Masters scholarship awards in Tanzania

The proposal was to admit three males and two females to the course. Unfortunately, there was no female candidate at DIT to apply for the scholarships

**D**ar-es-Salaam Institute of Technology had five slots for MSc Scholarships, all directed towards the newly-established MSc course known as "Masters of Computational Science and Engineering".

The proposal was to admit three males and two females to the course. Unfortunately, there was no female candidate at DIT to apply for the scholarships. Therefore,



Mr. Justus Selestine, DIT RC3, from Computer Studies Department



Ms. Odilia Macha, TMA RC3, or RC3, from IT Support Department

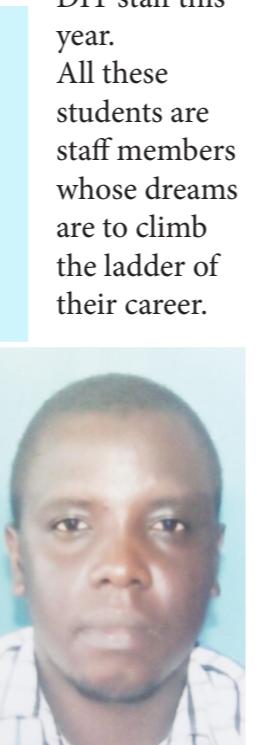
three males from DIT and a female from the Tanzania Meteorology Agency (TMA) were recruited as an alternative.

One scholarship was retained, assuming that DIT could get a female candidate this year. So far, only a male staff has applied.

Hence, we expect to offer the last scholarship to another male DIT staff this year.  
All these students are staff members whose dreams are to climb the ladder of their career.



Mr. Ibrahim Jumanne, DIT RC2, or RC3, from Computer Studies Department



Mr. Imani Kapungu, DIT RC1, from the Mathematics Department

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# JUBA: OHISA MOSES BEDA RECEIVES A MASTERS SCHOLARSHIP

**T**he positions for the scholarships were advertised on May 9, 2016. Three colleges (College of Applied and Industrial Sciences, College of Education and College of Computer Science & Information Technology) were asked to forward their candidates' application forms to Makerere University. One female candidate was nominated for the scholarship but was not admitted by Makerere University hence was not awarded the scholarship.

A four-member selection committee sat on September 8, 2016 and awarded Mr. Ohisa Moses Beda the scholarship based on merit. The applicant may support either RC3 or RC4. He is left to develop his preference as he attends his courses and interact with the component groups.

## EDITORIAL



The WIMEA-ICT project offers MSc. Scholarships and mentorship to continuing students

**T**he WIMEA-ICT project is run by the University of Bergen in Norway, Makerere University in Uganda, Dar-es-Salaam Institute of Technology in Tanzania and University of Juba is South Sudan. This quarterly newsletter highlights activities that took place between June and September 2016:

- Eight (8) Masters scholarships have been awarded by the partner institutions to deserving candidates.
- School mentorship visits were carried out in three schools to encourage (especially female students: i) to take on science subjects; ii) to consider themselves as problem solvers to the challenges in our society; and iii) to carefully consider their career choices as they advance in higher education.
- The WIMEA-ICT-funded PhD students had one-on-one mentorship sessions with their selected role models and herein they report on the rewarding experiences they got during these sessions.
- The WIMEA-ICT Research Component 3 team plan for manufacturing and deployment of the targe Automatic Weather Stations (AWS) has kicked off.

Until next time, aluta continua.

(Dr. Julianne Sansa-Otim (PhD)  
Project Principal Investigator, October, 2016)

# MENTORSHIP

## WIMEA-ICT visits Jinja Girls School and urges students to be high achievers



The WIMEA-ICT project undertook a number of mentorship talks in order to address the concern of low representation of women in science subjects.

One of the planned activities of the mentorship talks was to interest female secondary schools in taking on science courses as well as encouraging them to become high achievers.

The first talk was given at Jinja Girls Secondary School (Parvatiben Muljibhai Madvani Girls School) on June 30, 2016 by Dr. Agnes Rwashana Semwanga, the WIMEA-ICT Gender Coordinator (Deputy

Principal, College of Computing and Information Sciences) and Dr. Evelyn Kigozi Kahiigi, the Head of Information Technology Department. At this school, the team was received by the Deputy Headmistress Mrs. Omadi Elizabeth, Mr. Asiumwe Richard and Mr. Budala who shared about the need to motivate all the students as opposed to focusing only on science students. The team held two separate sessions for the upper secondary level S4-S6 which was addressed by Dr. Kahiigi.

Dr. Semwanga addressed the lower secondary S1-S3 in separate rooms.

Issues that were discussed included the following: the available career opportunities and determining the career path to pursue, the specific subjects needed to pursue a given career, setting goals and working hard towards academic excellence, how to identify the challenging subjects and work towards improving them, challenges such as premarital sex, drugs, alcohol, bad peer groups that draw students away from their goals and how they can address them. Other issues like choosing the right friends to support academic excellence, body hygiene and keeping healthy were also discussed.

At the end of the sessions, students wrote down their goals for the term, the activities they needed to carry out and the hindrances that they needed to avoid in order to achieve their goals.

Later on in the evening, S6 students requested for a private discussion regarding admissions to various universities and other social challenges that they were facing.



Dr. Kahiigi and Dr. Semwanga sharing a moment with the S6 Students after the mentorship talk



# You are problem solvers - Victoria Nile pupils told



Dr. Julianne  
Sansa Otim  
speaking to the  
Pupils



The second mentorship talk was held at Victoria Nile School - Jinja on June 30, 2016 by Dr. Julianne Sansa Otim, an Old Girl of the school. Dr. Sansa Otim, the Principal Investigator of the WIMEA-ICT project is also the Head of Networks Department at the College of Computing and Information Sciences, Makerere University. She said it is necessary to motivate the girl-child right from primary school level in a bid to address the concern of low representation of women in science subjects at university level.

During the talk to P5 – P7 pupils, she shared her career experience and encouraged them to aim high and work diligently towards their aspirations as well as believe in their abilities to reach their goals.

She also inspired them to think of themselves as problem-solvers to the challenges in society and to be willing to explore beyond their usual surroundings for the answers to these challenges.

Four teachers as well as the Headmistress participated in the session. The school expressed gratitude for the visit.



Victoria Primary  
School teachers in  
their staff room



A weather station at  
Victoria Nile School

# GAYAZA GIRLS PREPARED FOR UNIVERSITY EDUCATION



Gayaza High School  
students in the Library  
during the talks

The last mentorship talk was at Gayaza High School following the Gayaza High School Parent Teachers A'level meeting held in April 2016. During this meeting, it was noted that students lacked career guidance on the available programmes and how to compute the required points for admission to universities.

Dr. Agnes Semwanga was asked to provide mentorship talks to S5 and S6 students regarding their career paths and advice on how to apply for the various courses at the university.

On July 10, 2016, Eng. Florence Kiyimba, an Engineer from National Agriculture Research Organisation, Dr. Evelyn Kigozi Kahiigi, the Head of IT Department Makerere University, Dr. Agnes Rwashana Semwanga, the Deputy Principal College of Computing and Information Sciences Makerere University and Mr. Henry Semwanga-Lule, the Deputy Executive Director of PACE visited the school and held these mentorship talks on Sunday afternoon.

The first session of the talk was held by Dr. Semwanga, who focused on the available universities in Uganda (Private and Public), general and special admission requirements for

undergraduate programmes, the weighing system and cut-off points, how to determine your career path and degree programme, how to compute the cut-off-points for the programme and determine the grades one must attain to be admitted to that programme.

In the second session, students were divided into groups based on their preferred career paths for detailed discussions.

Teachers who attended these talks were Mr. Solomon Asea, Mrs. Annet Kaboggoza Musoke — Deputy Head Teacher and Mrs. Magaya, the A level Coordinator. They thanked the mentorship team for the enriching session and requested that more such opportunities be provided to the students for improved career selection.

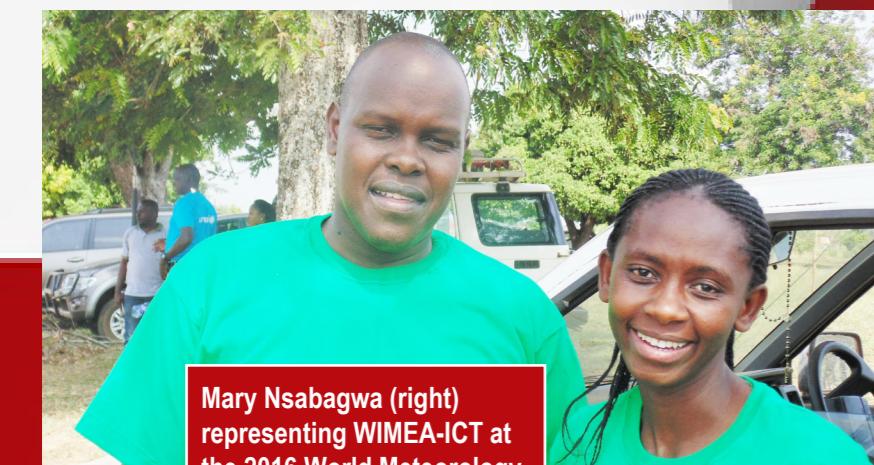


# TIME OUT FOR SCHOLARS, MENTORS

## MARY PONDERS ABOUT MANAGING PRIORITIES DURING THE PHD PROCESS

One of the gender activities in the NORHED project is to have female PhD students hold mentorship dinners with their role models. This time round, we decided that even the male students needed the mentorship meetings since some of them were lagging behind and others had social issues. The students together with their mentors were facilitated to a restaurant of their choice. We captured a few of their experiences:

**MARY NSABAGWA:** "I chose to have lunch with Dr. Julianne Sansa Otim. In addition to the supervisory role she has played, Dr. Sansa Otim has been an inspiration to me in many ways. She understands and encourages me to be better. We got the opportunity to discuss many non-academic matters including staying healthy, family, business and improving our social lives. This year, my mentorship talk was unique in a way because it gave me an opportunity to have a one-on-one talk with someone I felt comfortable with. The advice I received at that time has since helped me to progress in my studies. I thank WIMEA-ICT for such an opportunity."



Mary Nsabagwa (right)  
representing WIMEA-ICT  
at the 2016 World Meteorology  
celebrations earlier this year



Mary Nsabagwa with Dr.  
Julianne Sansa Otim at Javas  
Restaurant in Kampala

**"I chose to have lunch with Dr. Julianne Sansa Otim. In addition to the supervisory role she has played, Dr. Sansa Otim has been an inspiration to me in many ways. She understands and encourages me to be better"**

## DOREEN MUKASA LEARNS ABOUT TIME MANAGEMENT AND SETTING PRIORITIES

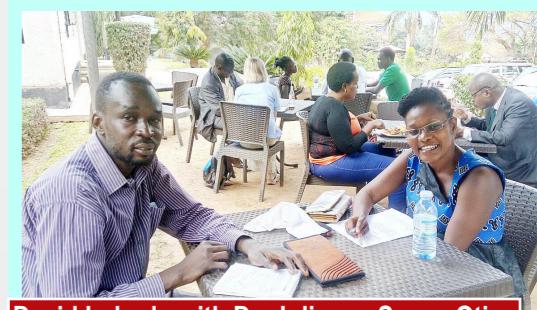
**DOREEN TUHEIRWE-MUKASA:** "I chose to meet with two mentors, Ms. Agnes Namulindwa Lumala who had made an attempt at pursuing a PhD but did not go through with it, and Ms. Fiona Ssozi who is currently finalising her own PhD study. We discussed several issues pertaining to the PhD journey, and I was particularly encouraged to set and stick to realistic time lines, advised on how to try and manage competing activities in my schedule and look for every possible opportunity to present my work in form of posters, or papers at conferences (beginning with regional ones), summer/winter schools or workshops in my line of research. This will help to continually refine my work through several peer reviews. It was a time well-spent."



Doreen, Fiona and Agnes

**"I was particularly encouraged to set and stick to realistic time lines and advised on how to manage competing activities in my schedule"**

My morale to succeed has been boosted - David Lukudu



David Lukudu with Dr. Julianne Sansa Otim

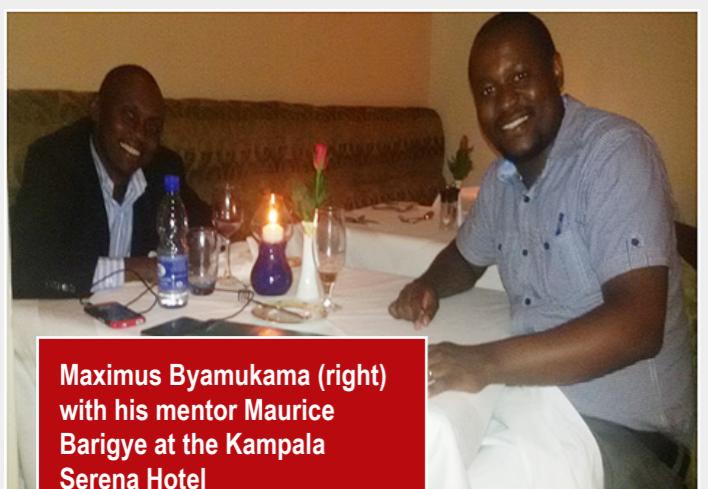
I met with Dr. Julianne Sansa Otim (under the mentorship program) at Makerere University Guest House on October 18, 2016. During the meeting, we discussed some very crucial issues all helpful in successful progress and completion of my program. Dr. Sansa Otim eloquently addressed my challenges (academic and social) which boosted my morale to achieve more than expected. We also discussed my academic progress as a PhD student and she suggested a number of action plans which I am going to put into action. Other issues addressed include how to blend courses with the research work, admission progress and my research proposal. In conclusion, I would like to thank the WIMEA-ICT project for giving me this opportunity to meet great people like Dr. Sansa Otim, who also receive my vote of thanks to help me progress.

## A REWARDING EXPERIENCE - ISAAC MUGUME

**ISAAC MUGUME:** "It was more than just a dinner but a remarkable union of two families. I, my wife together with my mentor Prof. Basalirwa and his wife met at Kolping Hotel in Kampala. It was such a rewarding experience, where we talked about many aspects of life that touched on career, business and family. My mentor clearly pointed out the need for hardwork, respect for family and making God the center of all. Thank you WIMEA-ICT for making it happen."



From Left: Prof Basalirwa, his wife, Mrs. Mugume and Isaac Mugume



Maximus Byamukama (right) with his mentor Maurice Barigye at the Kampala Serena Hotel

## I AM REFRESHED — BYAMUKAMA

**MAXIMUS BYAMUKAMA:** "I dinned with my mentor Maurice Barigye at the Kampala Serena Hotel. Maurice studied electrical engineering and went to Manchester for his masters in telecommunications. He is a senior manager at Ericsson Uganda and is six years my senior, in age and education and we have known each other socially for over seven years. We discussed a number of issues, including: the nature of the WIMEA research and the purpose of the dinner, the availability of my PhD advisors and general relationship with my WIMEA colleagues, activities done while in Norway and how the PhD is affecting my social life and especially my family. It was very refreshing finding someone to tell all the good and bad things that have been associated with the PhD and I look forward to the next dinner."

## ANDREW HOPES TO BE A CREATIVE RESEARCHER

**ANDREW MWESIGWA:** "I met with my mentor, Prof. Maria G. N. Musoke over dinner where we discussed the need to be focused as well as clearing my other programme schedule to create ample time for studies. We touched on the necessity to do a lot of literature review in my area of research, publish papers and earn a PhD. I need to do work that resonates with senior researchers in my field. We also discussed my appeal as a researcher being enhanced through my creative work as opposed to simply imitating my superiors; the need to innovate in any field requiring me to understand tastes of the establishment before injecting personal flair."



Andrew Mwesigwa (left) with his mentor Prof. Maria G.N. Musoke

## MANUFACTURE AND DEPLOYMENT PLANS OF AW STATIONS KICKS OFF

The Research Component 3, under the WIMEA-ICT project is in charge of manufacturing and deploying 30 Automatic Weather Stations in Uganda, 30 in Tanzania and 10 in South Sudan.

The project partners (University of Bergen, Makerere University, Dar-es-salaam Institute of Technology and University of Juba) are working closely with the region's National Meteorological Services (Uganda National Meteorology Authority (UNMA), Tanzania Meteorological Agency (TMA) and South Sudan Meteorological Department) to make this dream a reality.

A stakeholder's meeting was held from August 29 to September 2, 2016 at the College of Computing and Information science, Makerere University. UNMA was the key stakeholder alongside other partner universities.

It was during that time that the PhD students, newly recruited Masters' students and their supervisors got



Mr. Maximus Byamukama (L) talks to Dr. Julianne Sansa-Otim, WIMEA-ICT Principal Investigator and Mrs. Teddy Tindimanyire from UNMA

to discuss the automatic weather station manufacture and deployment plans.

Discussions included the status of the second generation automatic weather station, benchmarking plans for AWS data, plans for manufacturing, deployment, operation, maintenance and capacity building.

Also discussed were UNMA's preference for the locations being designed, their preference for storage functionality on the AWS sink node, preference of the frequency of AWS data summaries, among others.

More information can be got using this link: [http://wimea.mak.ac.ug/?page\\_id=1955](http://wimea.mak.ac.ug/?page_id=1955). The team took a tour of the radiation shield tests and installed a gateway for the second generation prototype at Makerere University.



The RC3 participants at Makerere University Weather station after their tour



# **WIMEA-ICT:** **Improving Weather Information** **Management in East Africa** **for effective service provision** **through the application of** **suitable ICTs**



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