Makerere University
College of Computing & Information Sciences

BIANNUAL NEWSLETTER

JANUARY - JUNE 2024

Dear staff, students and partners,

The College of Computing and Information Sciences(CoCIS) is pleased to introduce to you the first binannual newsletter (January- June 2024). The issue highlights major achievements recorded in the period under review. We have made tangible progress towards the achievement of our goals. On behalf of the management of CoCIS, I thank you for your dedicated service.

MAK COCIS NEWS

2023-2024

Find out the latest news and activities from Makerere University College of Computing and Information Sciences (CoCIS)

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MAK COCIS SCHOOLS

The School of Computing and Information Sciences (SCIT) was established by Makerere University Council on December 13, 2010, by upgrading the Faculty of Computer Science into a School with four Academic Departments; Computer Science, Networks, Information Technology and Information Systems.

The East African School of Library and Information Sciences (EASLIS) is one of the two schools that constitute the Makerere University College of Computing and Information Sciences (CoCIS). It was established in 1963, and this year 2023, it celebrated 60 years. The school pioneered the training of Librarians and Information scientists in the East African region

EASLIS Holds 2-Day Pedagogical Re-Orientation Workshop For LIS/RAM Teaching Professionals.

The East Africa School of Library and Information Science (EASLIS) last week (18th – 19th June, 2024) held a two day Library & Information Science (LIS), and Records and Archives Management (RAM) Teaching Professionals Pedagogical Re-Orientation Workshop.

The event held at Makerere University College of Computing and Information Sciences (Mak COCIS), Block B attracted a number of teaching staff at various ranks from Ugandan universities, and the region at large.

In his opening Remarks, the Principal-CoCIS; Prof. Tony Oyana thanked the leadership of EASLIS for holding such an important workshop aimed at improving teaching and learning. He emphasized the importance of pedagogical orientation for teaching staff noting that good subject matter knowledge and good research does not directly translate into good teaching.

He also highlighted a number of other important aspects that contribute to effective learning, including the need to create conducive learning environments, emotional intelligence through the ability to understand and relate to the learners and called for the need to deal away with challenge of superiority attitudes manifested in the by some African scholars that sometimes impedes free interaction with learners thereby affecting effective teaching.

He noted that everybody has a propensity to learn, but that people learn at different paces hence the need to give attention to every learner. He also emphasized the need for teaching staff to appreciate cultural diversity in learning environments.

Read More: https://cocis.mak.ac.ug/easlis-holds-2-day-pedagogical-re-orientation-workshop-for-lis-ram-teaching-professionals/

Uganda Launches AI Health Lab at Makerere University

In a significant stride towards enhancing healthcare through technology, the Government of Uganda, in collaboration with Makerere University, has inaugurated the Artificial Intelligence Health Lab. This pioneering initiative aims to revolutionize healthcare delivery using artificial intelligence (AI), marking a crucial advancement for the nation. The lab is situated in Block B, College of Computing and Information Sciences.

Launching the lab on 30th May 2024, the Permanent Secretary of the Ministry of ICT and National Guidance, Dr. Amina Zawedde highlighted the importance of this development. "Today marks a momentous occasion as we unveil the Artificial Intelligence Health Lab at Makerere University. This milestone signifies not just a step forward for the university but for our entire nation as we enter an era of innovation and advancement in healthcare through artificial intelligence," she remarked.

Dr. Zawedde emphasized the transformative power of AI in healthcare, noting its potential to revolutionize diagnostics, treatment plans, and personalized care. She acknowledged the government's ongoing efforts to integrate AI into healthcare through initiatives like telemedicine platforms, health data analytics, and AI-driven solutions in medical imaging and drug discovery.

Dr. Amina Zawedde, the Permanent Secretary - Ministry of ICT and National Guidance delivering her speech

However, she stressed the need for ethical and responsible AI deployment, addressing algorithmic biases, patient privacy, and equitable distribution of AI benefits.

Read More: https://cocis.mak.ac.ug/uganda-launches-ai-health-lab-at-makerere-university/

Retired Registrar & Accountants Honored

Ssebanakitta William, Patrick Feni Babanga, Prof. Tonny Oyana, Son to Kato Gogfrey and Dr. Peter Nabende cut the cake during the farewell party

The College of Computing and Information Sciences celebrated the services rendered by Retired Principal Registrar Patrick Feni Babanga and two Assistant Accountants- Godfrey Kato and William Ssebanakkitta. The tradition of celebrating and appreciating retiring staff, is one, that has been cherished by the College leadership.

Feni, Kato and Ssebanakkitta were recognised for their dedicated service to the university at farewell luncheon that was presided over by the College Principal, Prof. Tonny Oyana at Piato Restaurant in Kampala.

The three were presented with plaques and brown envelopes containing cash. The event was also attended by unit heads and administrative staff.

Prof. Oyana said, recognising staff is a welfare function, a Christian and Human tradition.

"Staff have worked with you for a very long time. They have given their heart and mind. The only thing you can do is to recognise them. Of course you can write a letter, but positive reinforcement sometimes requires that you step out of the traditional means of recognising staff", The Principal stated.

"Patrick has served us in a very critical unit of the college for a very long time. Since I joined the college, I have never heard of issues of examination and marks sale. His integrity was very good. So, such a person from the true African tradition, we share a meal to celebrate the journey they have been onto". Prof. Oyana appreciated.

Feni Babanga served the university for 32 years. He was appointed into university service on 29th December 1992 and retired on 17th March 2024.

Read More: https://cocis.mak.ac.ug/retired-cocis-registrar-and-accountants-honored/.

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Ds-I Malaria Project Launched

Participants pose for a group photo after the opening session

The Automated Mobile Microscopy for Malaria Diagnosis and Surveillance in Uganda (DS-I Malaria Project) has been launched. Field surveys and testimonies from regional hospitals and lower health centres III and IV were also presented during the ceremony held at Fairway hotel in Kampala on 11th March 2024.

The survey team visited the Eastern, Central, Northern and West Nile regions. The primary objective was to see the infrastructure at each hospital and health centres and to see if the lab technicians will accept the application.

DSI Malaria, is a multidisciplinary project that commenced in 2014. This initiative is funded by NIH, a fund that is under the initiative of the Data Science Africa Initiative supporting the work around health and improving health in Africa.

 Mak AI Lab in the College of Computing and Information Sciences works collaboratively with the College of Health Sciences, Kiruddu National Referral Hospital, Boston University, Mulago, Sunbird AI, and the Ministry of Health, as well as Okina Project, The project proposition is to leverage Artificial Intelligence for automated microscopy.

The project was officially launched by the Principal, College of Computing and Information Sciences Prof. Tonny Oyana. Oyana said despite all the many control measures, Malaria remains a health and economic burden in sub-Saharan Africa.

Read More: https://cocis.mak.ac.ug/ds-i-malaria-project-launched-field-surveys-from-regional-health-centers-indicate-fewer-lab-technicians-and-infrastructural-challenges/

EASLIS Celebrates the National D.E.A.R Day

On Friday 15th March 2024, some members of the management, staff and students of EASLIS-COCIS joined the rest of the nation in celebrating the national DEAR Day. D.E.A.R. Day, also known as Drop Everything and Read Day, is an annual celebration that is intended for everyone to dedicate a significant period during the day to reading. Uganda's National DEAR Day exists to promote the continued growth of a positive reading culture.

In a session held on Friday 15th March 2024, at 11:00am, the students, together with the Deputy Principal of the College of Computing and Information Science: Dr. Peter Nabende, the Dean of EASLIS: Dr Sarah Kaddu, the Librarian of EASLIS, and two teaching staff members joined the students in a reading session.

A silent reading session of any information material of choice was first held. After this session, a few students shared their experience of the reading session.

The Deputy Principal and the Dean also encouraged the students to continue reading and reminded them about the value of reading.

Read more: https://cocis.mak.ac.ug/easlis-celebrates-the-national-d-e-a-r-day/

Germans seek collaboration

A team of German scholars under the DAAD project coordinated by the institute of Languages and the German embassy visited the college to increase collaboration and research. The two met with researchers and discussed areas of interest.

600 GRADUATE FROM COCIS DURING THE MAK 74TH GRADUATION

661 graduands from the College of Computing and Information Sciences (CoCIS) were on 31st January awarded degrees and diplomas in the different disciplines during the 3rd session of Mak 74th Graduation ceremony.

Of that total, 626 graduates walked away with undergraduate (Bachelors degrees), 32 with Masters Degrees, 2 with PhDs while 1 got a Post Graduate Diploma.

The five-day long graduation ceremony kicked off on the 29th of January 2024 – 2nd February 2024. During the course of the 74th graduation ceremony a total of 12,913 graduands received degrees and diplomas of Makerere University. Of these, a total of 132 graduands graduated with PhDs, 1585 with Masters

degrees, 11,016 with Bachelor's degrees, 156 with postgraduate diplomas, and 24 with undergraduate diplomas.

53% of the graduands were female and 47% were male. In the category of PhD graduands, 46 were female and 86 were male. In the category of students graduating with Master's degrees, 699 were female and 886 were male.

Read more:
https://cocis.mak.ac.ug/over-600-graduate-from-cocis-during-the-mak-74th-graduation-ceremony/

OCULAR PROJECT STAFF SKILLED ON PROJECT OBJECTIVES

Makerere University staff and partners working under the Ocular project on 24th January, 2024 converged at Golden Tulip Hotel in Kampala in a capacity building session.

The project team lead by Dr. Rose Nakasi convened the capacity building workshop to gear up, energise and motivate members to deliver to the project objectives as a team without leaving anyone behind.

Makerere University under its Artificial Intelligence Lab received a grant funding worth US$1,500,000 (approx UGX 5.5bn) from Google to support its Ocular project that is undertaking research on usage of Artificial Intelligence to enhance the diagnosis process of Malaria, Tuberculosis and Cervical Cancer in Uganda.

The project was officially launched on 13th September 2023 under the College of Computing and Information Sciences (CoCIS) in collaboration with the School of Public Health (MakSPH).

Being in its first phase, the Project leader Dr. Nakasi justified the need for building capacity for the team members, not only to remind them on their roles and expectations, but also build a team that understands one another.

"Because if we understand each other as a team, then we are able to give our best not just as an individual but to deliver on the objectives of the project as a team. This capacity building workshop has enabled us to understand our roles, objectives of the project because as we work on different pieces of the project sometimes you may not know the bigger picture.

Read More: https://cocis.mak.ac.ug/mak-ocular-project-staff-skilled-on-roles-and-delivery-on-project-objectives-as-a-team/

BLOCK B GETS AWARD FOR FIRE SAFETY & ACCESSIBILITY

Building experts have chosen Makerere University' Block B of the College of Computing and Information Science (CoCIS) among the easily accessible and fire – safe Education Institutions Buildings in Uganda.

The building was named during the inaugural National Building Control Award (NBCA) 2023 at ceremony held on 8th December 2023 at the Imperial Royale Hotel in Kampala.

The ceremony was graced by among others the Gender Minister in charge of People living with Disabilities(PWDs) and the Executive Secretary National Building Review Board, Eng. Flavia Bwire.

CoCIS Block B Makerere University, Senate building of Soroti University and Machine Workshop Kichwamba UTC made it to the final list of Awardees under the category of the Public Educational Institutions Buildings.

During the verification exercise , the panel of experts considered accessibility to public buildings as the ability of an individual especially PWDs to independently reach, use, manoeuvre within the building or facility with limited or no hinderance on an equal basis with others.

In terms of external accessibility, the panel looked at access routes from the main gate of the building especially by wheel chair- users, demarcation of the PWD parking lot generally and access ramp to the building.
In terms of internal accessibility, focus was on the width of internal doors, colour of the door, frame paint, door handles, labelling of toilet doors, double leaf doors and glass doors. For washrooms, the panel considered PWD reserved lavatories, width of PWD toilets, grab rails, toilet seat facility, wash hand basin and urinal bowls. Other areas of interest included internal circulation, ramps, stairways for storey buildings and lifts among others.

For fire safety in public buildings, the panel looked out for functional smoke detectors, services fire extinguishers installed and water sprinkles for buildings with basement levels, emergency fire escapes, fire exit doors, emergency lighting guide, fire assembly points, fire hydrants and emergence contact numbers.

The panel also looked at the composition of the building committee, appointment of the members of the committee, minutes of meetings of the committee, plan approval register and the use of the Building Industry Management System (BIMS) and any other documents.

Read more: https://cocis.mak.ac.ug/cocis-block-b-gets-award-for-easy-access-and-fire-safe-education-institutions-buildings-in-uganda/
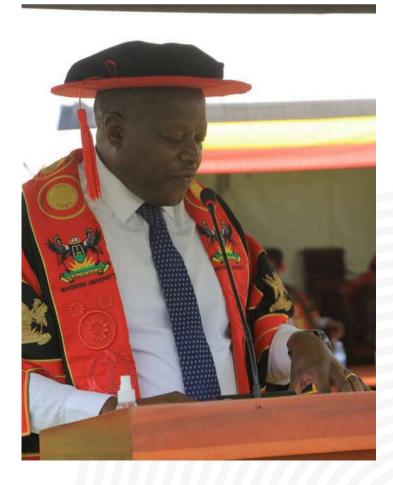
Five Get The Vice Chancellor's Research Excellence Awards 2023

During this third session of the Makerere 74th Graduation ceremony, the Vice Chancellor recognized the best researchers listed and published in the Graduation Booklet and the Mak News Magazine. The awards were based on Scopus database. The researchers were honored by the Vice Chancellor and Chairperson of Makerere University during the convocation luncheon held at Makerere University Convocation House.

CoCIS best researchers included.
- Prof. Bainomugisha Engineer
- Prof. Nabukenya Josephine
- Nabende Peter
- Professor Baguma Rehema
- Odongo Eyobu Steven

Prof. Nawangwe urged all staff to continue conducting research on national development priorities as well as matters of global interest and publishing their work in high-impact journals so as contribute to our drive to become a research-led university. He also advised on the need for the research to lead to patents, copyrights and trademarks, and tangible innovations in the form of products, policy briefs, manuals and others.

DEVICE TO MONITOR ELDERLY PEOPLE WITH DEMENTIA & COGNITIVE IMPAIRMENT IN RURAL UGANDA.

Researchers from <u>Makerere University</u> College of Computing and Information Sciences (CoCIS), led by a second-year PhD student Paddy Junior Asiimwe have designed a device to monitor elderly people with dementia and cognitive impairment in rural Uganda.

The device, wearable by the elderly (on the hand like a wrist watch or placed in the pocket), will monitor the patients' movement and location and then signal the caretaker and the hospital in case of emergencies.

This was disclosed during the research dissemination workshop held on 13th October, 2023 for the <u>Makerere University</u> <u>Research and Innovations Fund (Mak-RIF)</u> project titled, "Advanced Localisation Techniques on Smart Devices for Inclusive Location-based Services: A focus on healthy ageing for the elderly with dementia and mild cognitive impairment in rural communities".

This project relates to the ageing population that wants to live independent of their children or their children work in far away areas.

The Principal Investigator Mr. Paddy Junior Asiimwe noted that the biggest challenge is monitoring the elderly who are living in resource-constrained environments where access to power, internet, network and access to mobile communication is limited. The other challenge is people being not in a position to read and write.

Most available systems on the market according to Asiimwe assume that there is wireless internet everywhere, which is not the case with our local communities, more so in Uganda.

Read More: https://cocis.mak.ac.ug/mak-rif-researchers-design-a-tool-to-monitor-the-elderly-with-dementia-cognitive-impairment-for-emergency-response/

Permanent Secretary, MoICT & NG, Dr. Aminah Zawedde (3rd Right) flanked by Prof. Tonny Oyana (3rd Left) and the PI-Dr. Rose Nakasi Kiire (2nd Right) launches the Mak Ocular innovation on 13th September 2023 at CoCIS. Left to Right are Mr. Galandi Tony Kiire, Mrs. Elizbeth Gabona, Prof. Buyinza Mukadasi and a MakSPH official (Rear).

Google invests US$1.5M in Mak Ocular: An AI Automated Mobile Microscopic Diagnosis of Malaria, Cancer & Tuberculosis

Makerere University under its Artificial Intelligence Lab received a grant funding worth US$1,500,000 from Google to support its Ocular project that is undertaking research on usage of Artificial Intelligence to enhance the diagnosis process of Malaria, Tuberculosis and Cervical Cancer in Uganda. This grant is in addition to what Makerere University received from Google's philanthropic arm in 2019 for development of AirQo, an air monitoring project that uses Artificial Intelligence (AI) and low-cost technologies to generate and quantify data on air pollution in the designated areas in Uganda.

The Ocular Project was officially launched on 13th September 2023, by the Permanent Secretary, Ministry of Information and Communications Technology and National Guidance (MoICT & NG), Dr. Aminah Zawedde. The research is being undertaken by Makerere University College of Computing and Information Sciences (CoCIS) in collaboration with the Makerere University School of Public Health (MakSPH).

Read more: https://news.mak.ac.ug/2023/09/google-invests-us1-5m-in-mak-ocular-an-ai-automated-mobile-microscopic-diagnosis-of-malaria-cancer-tuberculosis/

Ocular Project PI - Dr. Rose Nakasi explaining the technology.

COCIS & KYUNGPOOK NATIONAL UNIVERSITY RENEW ACADEMIC COOPERATION

Officials from the College of IT Engineering, School of Electronics Engineering Kyungpook National University in South Korea were in Uganda for a week to renew and further academic collaboration with Makerere University College of Computing and Information Sciences(CoCIS).

The visiting team comprised Prof. Dong Seog HAN (Dean College of IT Engineering and Professor School of Electronics Engineering who is also Director Centre for ICT and Automotive Convergence), Professor Dongik Lee (Department of Embedded Control Systems Laboratory), and Professor Kalyana. C. Veluvolu.

The trio held a meeting with the Principal College of Computing and Information Sciences Prof Tonny Oyana, a few alumnus staff of Kyungpook National University, and prospective students in the College Geospatial Laboratory on 14th August 2023.

Prof. Oyana said, the college has collaborated with Kyungpook National University for five years through exchange of students and research and would like to renew and strengthen this collaboration.

The two parties according to Prof. Oyana were slated to sign a Memorandum of Understanding in three principal areas of collaboration namely; Faculty and students research and also conducting joint activities with their interest in South Korea and the Government of Uganda.

"One of their strong areas of research is on indoor research and localization. For example, how to improve sensor performance when inside the building, how do you make measurements, and use this information for mobility and emergency purposes in case there is an emergency in the building. They also work on control systems. Control systems work well with the entire production system", The Principal explained.

Read more:
https://cocis.mak.ac.ug/mak-cocis-and-kyungpook-national-university-renew-academic-cooperation/

COCIS IN THE MEDIA

In Video streams visit: https://cocis.mak.ac.ug/in-video-streams/

In print and digital media visit: https://cocis.mak.ac.ug/cocis-in-the-media/

'Character, positive energy are decisive in career development' (https://observer.ug/education/77552-character-positive-energy-are-decisive-in-career-development)

'Makerere gets Uganda's first smart classroom' (https://www.observer.ug/education/75107-makerere-gets-uganda-s-first-smart-classroom)

'AI for the Global Goals: Let's build a better, more sustainable future for all' (https://globalgoals.withgoogle.com/globalgoals/)

'Nawangwe Launches First Smart Classroom at Makerere' (https://chimpreports.com/nawangwe-launches-first-smart-classroom-at-makerere/)

'Mak set to use robots to deliver lectures' (https://www.monitor.co.ug/uganda/news/national/mak-set-to-use-robots-to-deliver-lectures-3944624)

FOR THESE AND MORE CONTACT:

The Principal,

Makerere University College Computing and Information Sciences

Email: principal.cis@mak.ac.ug / pr.cis@mak.ac.ug

Visit our Website: www.cocis.mak.ac.ug

Twitter: MakerereCoCIS

Instagram: https://www.instagram.com/MakCoCIS

LinkedIn: https://www.linkedin.com/company/101267353/