



NEWSLETTER

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African Centres of Excellence



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UR-ACEs shine at the first National Science and Technology Conference

The UR-African Centres of Excellence have thrilled participants to the first National Science and Technology exhibition as part of the National Science and Technology Conference. The Centres have exhibited their programs as one of contributors to science and technology education in Rwanda and in the region.

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ACE-DS held its 7th PhD symposium to assess candidates research progress

From 29th to 30th March 2022, the African Centre of Excellence in Data Science held its 7th PhD symposium in which students presented their research progress to their supervisors and co-supervisors.

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ACEESD-GIIH in search for new innovative business ideas for the second cohort incubation

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The former UR vice Chancellor Prof. Alexandre Lyambabaje delivering his remarks

University of Rwanda (UR) through the African Centre of Excellence

In Internet of Things (ACEIoT) held the seventh edition of the International Conference on mobile communication technology for development. This was organized in partnership with Karlstad Business School, Sweden.

The three-day hybrid meeting was held from April 27 to 29 in Kigali and connected various universities from all over the world and researchers, among others. The conference served as an opportunity for researchers, students and other partners, as well as innovators in this industry to discuss the role of research and knowledge development in the area of mobile technologies.

“ Nowadays mobile technologies are everywhere driving social-economic transformation, and also contributing to growth in economic development, ”

Dr. Ignace Gatere, the Principal of the College of Science and Technology (CST) said that this meeting is important, arguing that it's essential that researchers understand their role and the potential impact technology can play.

“Nowadays mobile technologies are everywhere driving social-economic

transformation, and also contributing to growth in economic development,” he said.

He called the meeting a good initiative for availing a platform for discussion between the university, government, and the private sector to enhance the impact of mobile technology for development. Commenting on the importance of mobile communication use for development, he said it plays a significant role in all sectors such as health and agriculture among others.

“We see mobile technology coming as a solution to increasing the use of technology for development,” he added. Speaking of expectations, Gatere said that there is hope for more partnerships to emerge from this conference, and also ensure that reflections have an impact on social-economic transformation.



UR-CST Principal Dr. Ignace GATARE

Prof. Alexandre Lyambabaje, the Vice-Chancellor of UR pointed that ICT through digitization is transforming business models, the policy landscape and social norms highlighting that mobile communication technology is transforming lives through improved ways of doing and conducting business both in developing and developed countries.

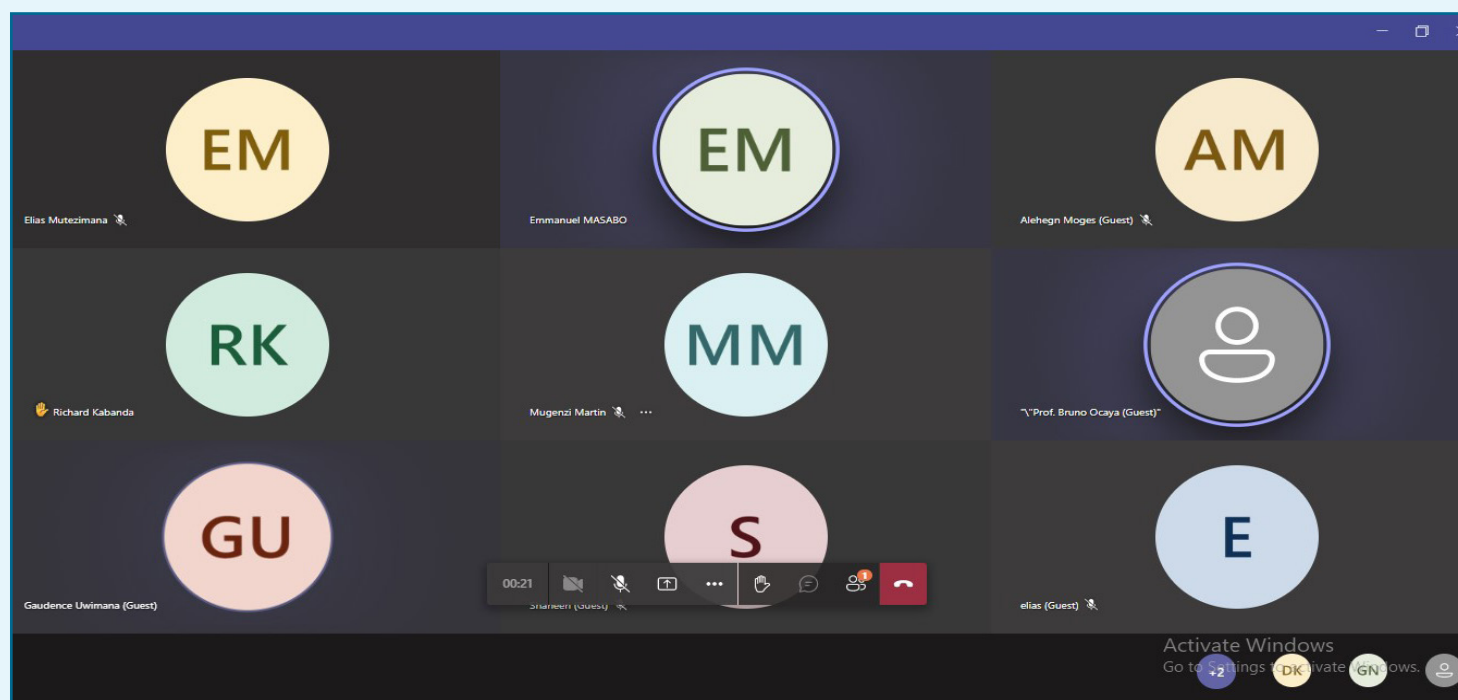
“The use of information & communication technology (ICT) is on the rise and bears a number of benefits transforming lives by driving and supporting community –level social economic changes as well as local national and global economies and international development efforts”, he said..

www.aceiot.ur.ac.rw



Physical participant pose for a group photo

ACE-DS held the 7th PhD symposium to assess candidates' research progress



The symposium was conducted virtually due to Covid_19 restrictions

From 29th to 30th March 2022, the African Centre of Excellence in Data Science held the 7th PhD symposium in which students presented their research progress to their supervisors and co-supervisors.

A two-day symposium was held virtually in respect to the restrictions to curb the spread of Covid-19 pandemic.

The main objective of the symposium for PhD students is to assess their research progress, guide and provide inputs to their research with the support of multidisciplinary panelists from the University of Rwanda, with inputs from regional and International Universities for a smooth completion of the program.

“ The main objective of the symposium for PhD students is to assess their research progress, guide and provide inputs to their research with the support of multidisciplinary panelists from the University of Rwanda, with inputs from regional and International Universities for a smooth completion of the program.”

In his welcome remarks, the Acting Principal of the College of Business and Economics (CBE) hosting the Centre Dr. Pierre Claver Rutayisire

commended all participants for attending and added, “This is the opportunity not only for the Centre to achieve its mandate but also for PhD students to present their research progress and get constructive comments from data science experts”.

During the symposium, there was identification of students who are ready for synopsis presentation, those who are ready for comprehensive exam by Doctoral Committee

The PhD symposium is organized every six months.

ACEIoT acquires the awaited IoT Lab equipment



ACEIoT staff pose for a group photo after receiving the equipments

The African Centre of Excellence in Excellence in Internet of Things (ACEIoT) has acquired the IoT lab equipment as part of phase one as per the signed collaboration agreement between UR and Rochester Institute of Technology (RIT) for IoT lab establishment.

The total cost of the lab and associated trainings of staff is \$255,000. The equipment will be useful, not only to the Centre but also to professionals in IoT in the region.

The unique IoT Lab in the region is expected to benefit Master, PhD students and IoT industry in practical experiments and serve as a training facility for professionals in IoT from the region who want to enrich their career in the internet of things and other emerging technologies.

The lab equipment include Advanced Spectrum Analyser, Open Sniffer, Vector Network Analyser, Docker IoT Node among others.

After the installation of the equipment, experts from RIT will provide training to local staff on the function and management of the lab.

Two rounds of equipment were received and one more is expected in coming days.

“ We are thankful to the partnership with RIT. This lab will enable us to provide practical skills in IoT and other emerging technologies and ultimately boosts the quality of education that the Centre provides, said Associate Professor Damien Hanyurwimfura, Centre Director. ”



Some of the equipments



Some of the equipments

UR-ACEs shine at the first National Science and Technology Conference



Participants visited ACEDS stand

The UR-African Centres of Excellence have thrilled participants to the first National Science and Technology exhibition as part of the National Science and Technology Conference. The Centres have exhibited their programs as one of contributors to science and technology education in Rwanda and in the region.

The conference was organized by the Rwanda National Council of Science and Technology (NCST) in collaboration with different partners and took place on 31st March -1st April 2022.

Held under the theme: “Leveraging the Potential of Science and Technology to Mitigate Challenges Associated with COVID-19 pandemic in Developing Countries,”



ACEIoT exhibited drone technologies

the conference deliberated on innovative strategies that utilize evidence-based scientific and technological tools to close the gap for Covid-19 related challenges, examined existing data to leverage the potential for science and technology to mitigate the impact of the Covid-19 pandemic in developing countries, and looked at sustainable solutions and strategies to inform future research and capabilities in response to COVID-19.

The Centres exhibited different master and PhD programs, which are taught, professional short courses that are offered and different initiatives from students all meant to contribute to the improvement of science

“ This is the first Rwandan conference on science, technology and innovation to provide an opportunity for global scientists to deliver on key important areas of digital divide and the key data gaps to address the Covid-19 pandemic,”

education to find solutions to existing regional challenges.

Speaking at the conference, Dr. Eugene Mutimura, the Executive Secretary of the National Council of Science and Technology (NCST) said the conference was an essential platform for scientists and leaders to look at the crucial contribution of science and technology in addressing health challenges and supporting the society and economy in times of turmoil, as well as highlighting the importance of collective demand for scientific expertise and coordination.



Participants visited ACEITLMS stand

“This is the first Rwandan conference on science, technology and innovation to provide an opportunity for global scientists to deliver on key important areas of digital divide and the key data gaps to address the Covid-19 pandemic,” he said.



Participants visited ACEESD stand

ACEESD-GIIH in search for new innovative business ideas for the second cohort incubation



New innovators presented their ideas

The Grid Innovation and Incubation Hub (GIIH), a research, innovation and entrepreneurship initiative has started the process of admitting the second cohort of young innovators. The call for the second cohort has attracted 27 young innovators' ideas from which 15 ideas will be admitted to the boot camp getting mentorship and coaching.

During a period of 6 days, applicants pitched their ideas and 15 were

“ During the selection, young innovators were given opportunity to explain their innovations and the selecting team would judge weather the idea is innovative, scalable, and have huge transformational potential, making them financially viable, freestanding, and competitive in the open market.”

selected to be incubated. The selection was facilitated by Bag Innovation have delegated their experts who will work with other appointed experts from University of Rwanda and industry, and most of them will meet the applicants as key motivation speakers.

During the selection, young innovators were given opportunity to explain their innovations and the selecting team would judge weather the idea is innovative, scalable, and have huge transformational potential, making them financially viable, freestanding, and competitive in the open market

With this process, successful incubatees with prototypes and MVP will be given seed funding for market validation for a period of six (6) renewable, register their ventures and be showcased during the innovation week 2023.



One of innovators presenting her innovative business idea

A team of experts from Kent State University (KSU), USA, visited ACEITLMS to explore potential collaboration areas



KSU team discussed with UR-CE team for possible collaboration

The intent was to identify the needs of TVET and teaching of Mathematics such as the use of manipulatives or other instructional materials.

Before holding fruitful discussions in a meeting with the ACEITLMS/UR-CE team, the KSU delegation made a Campus tour to explore the conducive environment and the teaching and learning facilities (i.e. Sciences and mathematics, ICT Labs and Multimedia Studio and college library) that are in place at the college for students and teaching staff.

A team of experts from Kent State University (KSU) paid a three-day visit to the African Centre of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS), University of Rwanda (UR)-College of Education (UR-CE) to discuss possible collaboration projects between Kent State University and ACEITLMS/UR taking into consideration some

common interest between the Kent State University (KSU), through its School of Teaching, Learning & Curriculum Studies (STLCS), ACEITLMS, UR, and some other organizations in Rwanda.

The KSU team, therefore, was interested in understanding the teaching of vocational education in Rwanda's educational institutions and how mathematics in primary schools is organized.



Guests toured the UR-CE campus

In view of the above, the Kent State University team and ACEITLMS/UR-CE staff discussed what is relevant for the college and the ACEITLMS for the purpose of collaboration.

The KSU team and ACEITLMS/UR-CE team discussed the possible collaboration on grant proposal writing.



Guests toured the UR-CE campus

ACEITLMS, ACEIoT in the process of acquiring international accreditation for their programs



Experts from AQAS met with UR senior managers

According to the signed agreement with UR, the accreditation process will follow the following steps:

1. Submission of Self Evaluation Report (SER) that includes all the information about the offered programmes to be accredited.
2. Initialization of International accreditation by AQAS
3. Field visit of AQAS experts who will verify submitted information in SER.
4. The Accreditation Commission decides on the accreditation of the programmes

Experts from AQAS have visited both Centres to verify the submitted information in a bid to see if they meet all the requirements to be accredited.

The African centre of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS) and the African Center of Excellence in Internet of Things (ACEIoT) and are in the process of acquiring the international accreditation for their programs at Master and PhD levels.

This follows the national accreditation provided by the Rwanda Higher Education Council (HEC)

Through the UR approved guidelines for selecting accrediting institution for international accreditation, The Agency for Quality Assurance(AQAS), a Germany company specialized in accrediting higher learning institutions has been selected as accrediting body for the eight programs being taught at both Centres.

“ Experts from AQAS have visited both Centres to verify the submitted information in a bid to see if they meet all the requirements to be accredited ”



Experts from AQAS at ACEIoT

ACEIoT students' rejoice as the newly acquired lab opens



Students during experiment in the new LAB

Students pursuing master and PhD programs in ACEIoT have expressed joy after starting enjoying the experiments in the newly acquired IoT lab. The lab equipment was received in February and March this year through the partnership with Rochester Institute of Technology.

Desire Hakizimana, a master student, one of students who accessed the lab for the first time said that students are proud of this new lab.

“We really appreciate that the Centre has now acquired the lab.

Students are happy for it and we are quite sure that this will help us increase our skills, especially practical ones in addition to theories”, he said.

“ We are now getting the basics and we are eager to be allowed to get into the lab ourselves and have a full access in an ordered way, so that even when the lecturer is not available, we can have more practical activities ”

“We are now getting the basics and we are eager to be allowed to get into the lab ourselves and have a full access in an ordered way, so that even when the lecturer is not available, we can have more practical activities”, he added.

The lab is expected to be a training facility for not only IoT students pursuing masters and PhD programs in ACEIoT but also professionals from Rwanda and abroad who want to enrich their career in IoT.

ACE-ESD trains 25 female engineers, technicians & operators from Rwanda Energy Group (REG)



Trainees pose with trainers after the training

The African Centre of Excellence in Energy for Sustainable Development has provided theoretical and practical skills to 25 women engineers, technicians & operators from Rwanda Energy Group in order to equip them with required skills to better understand and perform in their current areas of work.

During a 10-day training, newly hired female engineers,

technicians & operators were assisted in learning their jobs

and enhanced existing staff's capabilities.

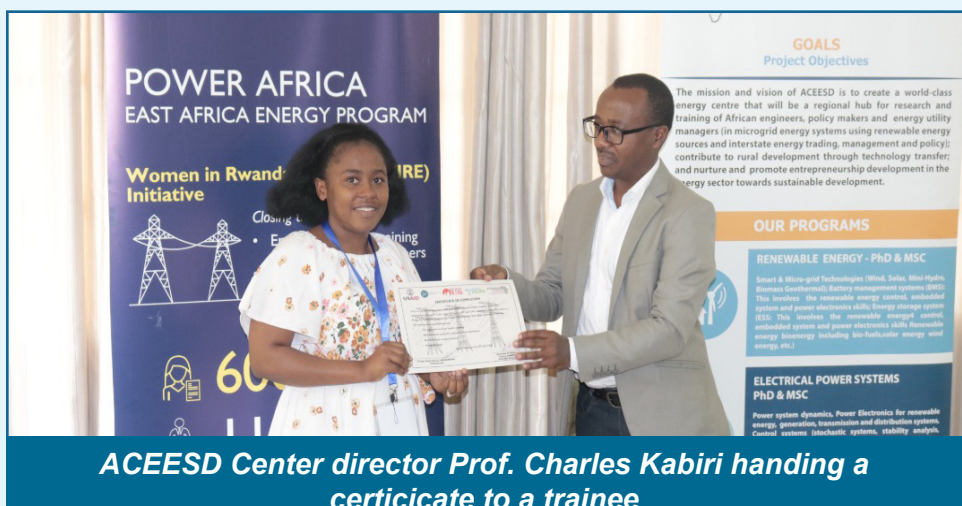
“ We are so proud of the skills we got. We had a good training team and we hope the skills we got will help us better perform in our daily duties. We request that this kind of training be extended to other staff and if possible, increase the period of the training”

This has been a good opportunity to instill a broader practical knowledge of all the areas of transmission-generation utility in Rwanda and beyond.

Trainees were trained by ACE-ESD engineers and conducted practical experiment in the acquired High E- Tech Smatgrid Laboratory facility, found at ACEESD, one facility of this kind in the region.

Speaking at the closing of the training, one of the trainees acknowledged the provided skills and requested that such kind of trainings be extended to other staff.

“We are so proud of the skills we got. We had a good training



ACEESD Center director Prof. Charles Kabiri handing a certificate to a trainee



Josephine Uwamahoro from REG handing a certificate to a trainee

team and we hope the skills we got will help us better perform in our daily duties. We request that this kind of training be extended to other staff and if possible, increase the period of the training”, she said.

Josephine Uwamahoro, who spoke on behalf of REG management, reiterated the commitment of REG

“ I urge you to keep the courage that you showed during this training and make sure the time you spent and skills you got are reflected in the performance you will show once back to your duties.”

to ensure women are brought on board in energy sector in all levels “We want to see women in REG fully empowered to occupy all positions be technical or managerial ones”, she said.

She added, “I urge you to keep the courage that you showed during this training and make sure the time you spent and skills you got are reflected in the performance you will show once back to your duties.”

The energy space in Rwanda continues to be a male dominated workforce where female technicians are significantly under-represented.

According to the 2020 EAEP gender assessment report of the energy sector in Rwanda, women employed in technical roles in 11 entities surveyed indicated that only 10% were working in technical roles whereas only 2% were technicians. Currently, only 22% of REG staff are female.

Through REG, Rwanda has committed to creating the world's first all-female-workforce power plant at the new Nyabarongo facility outside of Kigali. The plant construction has commenced, with anticipated commissioning in 2024, giving REG a deadline for identifying, training, and empowering an all-female workforce across all ranks.

www.aceesd.ur.ac.rw

Our respective programs

African Centre of Excellence in Data Science (ACEDS) based at UR-College of Business and Economics, Gikondo



We have Day and evening Programs:

- Master/PhD of Science in Data Science in Data Mining
- Master/PhD of Science in Data Science in Econometrics
- Master/PhD of Science in Data Science in Biostatistics
- Master/PhD of Science in Data Science in Demography
- Master/PhD of Science in Data Science in Actuarial Sciences

N.B: All PhD programs are by research.



In partnership with Data Science Council of America (DASCA), we also offer certified professional Short courses:

- Associate Big Data Engineer (ABDE)
- Senior Big Data Engineer (SBDE)
- Associate Big Data Analyst (ABDA)
- Senior Big Data Analyst (SBDA)
- Senior Big Data Analyst (SBDA)

More details: www.aceds.ur.ac.rw

African Centre of Excellence for Innovative Teaching and Learning Mathematics and Sciences (ACEITLMS) based at UR-College of Education, Rukara



We have Day and Weekend Programs:

- Master of Education in Biology Education
- Master of Education in Chemistry Education
- Master of Education in Physics Education
- Master of Education in Mathematics Education
- PhD in Biology Education
- PhD in Chemistry Education
- PhD in Physics Education
- PhD in Mathematics Education

N.B: All PhD programs are by research.

More details: www.aceitlms.ur.ac.rw

African Centre of Excellence in Internet of Things (ACEIoT) based at UR-College of Science and Technology, Nyarugenge



We have the following Programs:

- Master/PhD in Embedded Computing Systems (ECS)
- Master/PhD in Wireless Sensor Networking (WSC)

N.B: All PhD programs are by research.

Short courses:

- a. Rapid Prototyping
- b. Blockchain Fundamentals and Applications
- c. Drone fundamentals and applications
- d. LoRA technologies
- e. IEEE GRSS Drone Sensor Deployment

More Details: www.aceiot.ur.ac.rw

African Centre of Excellence in Energy for Sustainable Development (ACEESD) based at UR-College of Science and Technology, Nyarugenge



We have the following Programs:

- Master/PhD of Science in Energy Economics
- Master/PhD of Science in Renewable Energy
- Master/PhD of Science in Electrical Power Systems

N.B: All PhD programs are by research.

Short courses:

Power Engineering, Smartgrid, Microgrid

More Details: www.aceesd.ur.ac.rw

Adresses and Contacts



African Center of Excellence in Data Science (ACE-DS)

Email: aceds@ur.ac.rw

Website: www.aceds.ur.ac.rw

Phone: + 250 788 521 896

Twitter: @UR_aceds

Facebook: ACE in Data Science

African Center of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS)

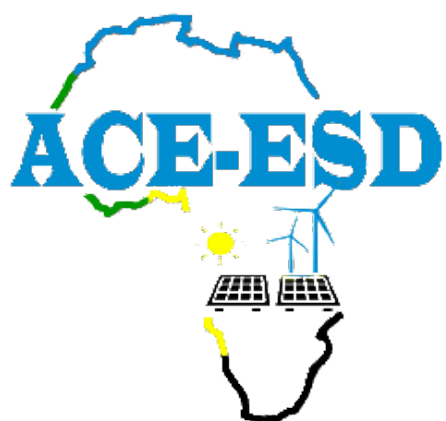
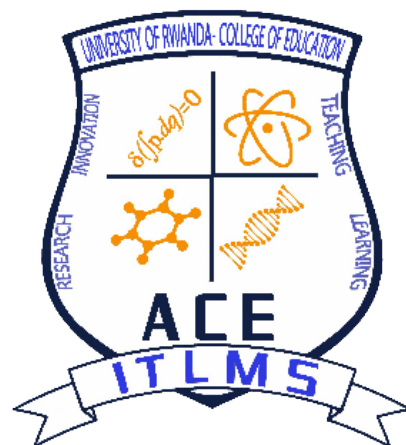
Email: wrceaceitlms@gmail.com

Website: www.aceitlms.ur.ac.rw

Phone: +250 788 221 035

Twitter: @aceitlms

Facebook: ACE for Innovative Teaching and Learning Mathematics and Science



African Center of Excellence in Energy for Sustainable Development (ACEEDS)

Email: aceesd@ur.ac.rw

Website: www.aceesd.ur.ac.rw

Phone: +250 785 923 610

Twitter: @ace_esd

Facebook: ACE in Energy for Sustainable Development

African Center of Excellence in Internet of Things (ACEIoT)

Email: aceiot.cst@gmail.com

Website: www.aceiot.ur.ac.rw

Phone: +250 783 016 900

Twitter: @ACEIoT_UR

Facebook: African Center of Excellence in Internet of Things-ACEIoT

