



NEWSLETTER

Issue N° 07 | Nov-December, 2021

African Centres of Excellence



New Year Message

Dear UR-ACEs Partners,

The year 2021 has been fruitful for the UR-African Centres of Excellence. We have made tangible progress towards the achievement of our goals regardless of the ongoing COVID-19 pandemic.

On behalf of the management of the Centers, we thank you all for your participation and contribution towards this success and request you to keep the momentum to achieve more this year 2022.

Happy New year.



Editorial

Inside the ACE-ESD's Grid Innovation and Incubation Hub (GIH)

Grid Innovation and Incubation Hub (GIH) is a research, innovation and entrepreneurship initiative that is hosted by the African Centre of Excellence in Energy and Sustainable Development (ACEESD) in the College of Science and Technology (CST) at the University of Rwanda under the World Bank funding.

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Inside the ACE-ESD's Grid Innovation and Incubation Hub (GIIH)



One of incubitees explaining his innovation

Grid Innovation and Incubation Hub (GIIH) is a research, innovation and entrepreneurship initiative that is hosted by the African Centre of Excellence in Energy and Sustainable Development (ACEESD) in the College of Science and Technology (CST) at the University of Rwanda under the World Bank funding.

The two main objectives of GIIH are to create a bridge between the university and various sectors in the economy in order to make research relevant to emerging issues, and to support innovation and entrepreneurship through incubator and accelerator programs.

The GIIH main business is to discover,

nurture and potentially fund exceptional youth's business ideas that are innovative, scalable, and have huge transformational potential, making them financially viable, freestanding and competitive at the open market.

“ We believe that exceptional ideas and exceptional founders should be matched with exceptional support. We seek to discover amazing, out-of-the-box, disruptive, highly innovative, scalable, and potentially transformational ideas from students interested in diverse business ideas but mostly focusing in renewable energy ”

argues Pascal Nyiringango, the Head of Grid Innovation and Incubation Hub.

The flagship Grid Innovation and Incubation Hub (GIIH) is a multi-creative space which will offer student startup ventures a unique environment for growth and value creation through its flagship Grid Incubation Business Incubator Program (G-BIP). “

Through a rigorous competition, the most promising business ideas' owners were selected to be mentored, coached and supported to make their ideas viable products to be put on market. Now they are at the stage of market validation.

Marcus Dushimimana is one of these young entrepreneurs whose idea is to develop an app that will help in settling misunderstanding between the landlord and the tenant in terms of power sharing. He explains that the “Shared Meter” app will facilitate tenants to use the power they purchased without any conflict among them”

“There has been misunderstanding among tenants and landlords who share the same cash power whereby by some were consuming much power while other were consuming less but they are required to pay the same amount. This app will facilitate everyone to use the power he/she purchased although they will be

still using the same cash power”, He explained.

So far five (5) prototypes are at the stage of market validation whereby they are being used to the market to see how effective they are and how the consumers appreciate them.

www.aceesd.ur.ac.rw

ACE-DS PhD students trained in academic writing and communication



Students during training in English for Academic Writing and Communication

From 21st to 24th December 2021, 29 PhD students held a four day training on English for Academic Writing and Communication. The training aimed at equipping PhD students with English for Academic Writing and Communication, distinguishing types of Academic Writing, acquainting students with skills to write publishable articles and familiarizing PhD students with referencing styles and avoiding plagiarism.

“ The training aimed at equipping PhD students with English for Academic Writing and Communication”

Topics that were discussed during the training include dissertation writing, writing for publication, Manuscript writing choosing a journal, instructions to authors, Submission, reviewing and dealing with reviewers’ feedback,

Developing strong starting and powerful ending, among other topics.

Basing on the General Program Structure of the Doctor of Philosophy Degree by Research, every PhD student is required to compulsorily take the module of English for Academic Writing and Communication throughout his PhD studies. The training was facilitated by Lecturers from the UR’s Centre of Language Enhancement.

www.aceds.ur.ac.rw

The Practice Manager-Education from World Bank visited ACEs



After the visit participants posed for a group photo

On December 14th, 2021, a delegation from World Bank led by Practice Manager-Education Ms. Muna Meky paid a courtesy visit to University of Rwanda's Centres of Excellence funded by the World Bank.

The delegation was received by the Principal of the College of Science and Technology Dr Ignace Gatare who briefed the delegation on the progress of Centres and initiated mechanisms for their sustainability after the funding.



*World Bank Practice Manager-Education
Ms. Muna Meky*

The Principal commended the visit and highlighted Centres' commitment to ensuring they positively impact on the education system regionally and internationally.

“ Ms. Muna Meky appreciated the progress made so far and urged the Centres Management to keep on ensuring the active partnership with industry to be more relevant to the community. ”

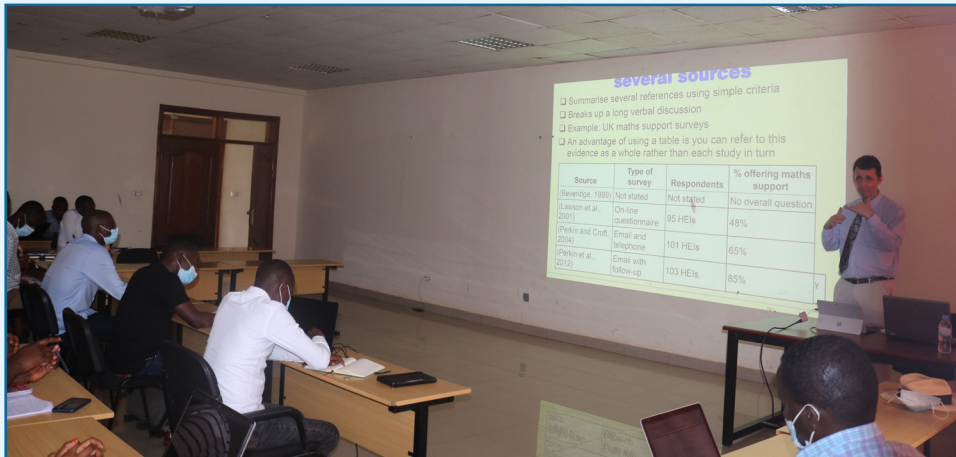
Students, beneficiaries of the project expressed their satisfaction to the support from World Bank and commitment to finding solutions to challenges that the community is still facing.

Ms. Muna Meky appreciated the progress made so far and urged the Centres Management to keep on ensuring the active partnership with industry to be more relevant to the community.



*Dr Ignace Gatare, Principal of the College of
Science and Technology*

The ACEITLMS Master students trained on Research Proposal and Academic Writing



The training was facilitated by Dr. Peter Samuels

On 12th and 13th November 2021, the African Centre of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS) held a two-day Training Workshop on Research Proposal Development and Academic Writing.

The training was attended by 19 MEd students from ACEITLMS and was aiming at equipping them with sufficient and updated skills to write Research Proposals as a requirement of MEd programmes.

This training was jointly facilitated by the Teaching and Learning Unit of ACEITLMS and Dr. Peter Samuels from Birmingham City University, UK, Centre's key partner in this matter for the last four years.

Among issues covered during the training workshop were selecting a focus, identifying

critical questions, stating a rationale, conducting a literature review, locating a theoretical framework, preparing data collection plan, planning for data analysis, anticipating the report

“ It was a great pleasure being in this inspiring workshop, I really enjoyed the session a lot where I learnt how paragraph and academic work are written and structured”

outline, dealing with validity and reliability concerns, and acknowledging the limitation of the research.

“It was a great pleasure being in this inspiring workshop, I really enjoyed the session a lot where I learnt how paragraph and academic work are written and structured,” testified one MEd student who attended the training.

In addition, the workshop was an opportunity to a better understanding of the principles of academic writing and become more competent at it and personal professional development for what a postgraduate student needs to write the publishable papers in order to share their knowledge.

Such workshops were also organized for all previous cohorts and have proven to be a very important support to students.



Students posed with trainers

ACEIoT Students visited Zipline to witness the functioning of the Unmanned Aerial Vehicles (UAVs).

On 8th November 2021, 24 Master's students, specializing in Wireless Intelligent Sensor Networks visited Zipline, a local Company that delivers vital shipments through quick and most reliable supplies to hospitals & health settings to witness the functioning of the Unmanned Aerial Vehicles (UAVs).

The main objective of the visit is to witness and appreciate the specialized tools for Unmanned Aerial Vehicles (UAVs) flights mission plans, flying process of Fixed-wing air-crafts and understanding of the flying procedures.

The visit was organized in a course, which deals with planning of UAV's flight missions, mapping and photogrammetry among other IoT applications.

Gasana Biseta Jururyishya, one of students said the visit was very impressive, interesting, crucial, encouraging and helpful for application of UAV in IoT module as they learnt more as they were able to observe the application of UAVs in real life context.



ACEIoT Master's students at Zipline office in Muhanga District

“ The visit helped us in transferring our theoretical knowledge and applying it effectively through real IoT tools. We have touched and felt key components of the complete UAV technology for aircraft flying without a pilot; we also investigated on terrain the various rules that apply to firing a drone ”, he said.

“We saw various considerations before, during and after piloting the aircraft and the necessary software used to operate, control, protect and maintain a drone at Zipline”, he added.

Students have recommended the Centre to keep on organizing such visits as the knowledge package obtained on field boosts the students' understanding of module and helps being familiar with real life situation of what they learn in class.



ACEIoT students receiving details on drones operations

At the site, students got to exchange with the Zipline team and knew challenges facing drone technology in general and discussed ways to solve them.

This visit served as an opportunity to relate theories that they learnt in class, know what really happens at the UAVs sites and enhanced their practical understanding of the module.

www.aceiot.ur.ac.rw

ACEs received the fourth cohort of Master & PhD students



ACEDS received PhD students



ACEIOT received Master students

ACE-DS signed a partnership agreement with Hasselt University



The African Centre of Excellence in Data Science has signed a partnership agreement with Hasselt University from Belgium for joint supervision and awarding of a Doctorate diploma. The two institutions agreed that they shall assume joint responsibility for the supervision of the PhD candidate's doctoral research project, the organization of the doctoral examination and the award of a doctoral degree.

Mohamed Semakula is the first student to benefit from this agreement. Upon successful defense of his thesis, the partner institutions will each award the candidate one Doctoral diploma.

The Doctor in Data Science: Biostatistics from University of Rwanda and the Doctor in Sciences: Statistics from Hasselt university

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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:

- a. Associate Big Data Engineer (ABDE)
- b. Senior Big Data Engineer (SBDE)
- c. Associate Big Data Analyst (ABDA)
- d. Senior Big Data Analyst (SBDA)
- e. 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)

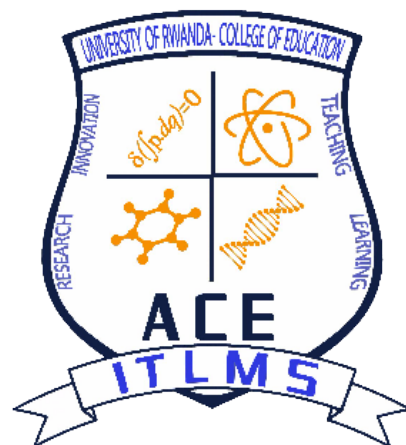
Email: wrceaceitlms@gmail.com

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

