1

Guest Editorial Note

Dear readers,

This is a Special Issue of the SAIEE Africa Research Journal (ARJ), containing papers sourced from East Africa. This Special Issue for East Africa is a result of a cooperation agreement between the IEEE (through the Ad Hoc Committee on Africa Activities (AHCAA)) and SAIEE. The cooperation seeks to solicit more submissions to the SAIEE ARJ by focusing on the different geographical areas of Africa.

In this Special Issue, we considered papers where at least one author is based at an Institution in East Africa, or where the paper uses East Africa as a case study. The papers have gone through a rigorous peer-review process, where each paper was reviewed by two independent expert reviewers. From this process, three papers have been accepted. The accepted papers span a number of fields in electrical engineering.

The paper by J. Namaganda-Kiyimba and J. Mutale presents an efficient and robust sizing approach for off-grid PV microgrid systems using a combination of mixed integer linear programming to optimally size the PV microgrid and a "density-based spatial clustering of applications with noise" algorithm to aggregate load and meteorological data.

The paper by E. Umuhoza et al. uses unsupervised machine learning techniques to describe how to build a behavioral-based segmentation model that differentiates African credit card holders based on their purchases data.

The paper by A. K. Ssebwana and E. Bainomugisha presents a design of a Secure Context-aware Content Sharing Kiosk, an enhancement to previous Content Sharing Kiosk approaches, with support for secure online and offline content distribution and sharing. The designed Kiosk was tested for content sharing in a hospital setting.

GUEST EDITORS

Dorothy K. Okello (S'94-M'16) received the B.S. degree in Engineering (Electrical) from Makerere University, Kampala, Uganda in 1992. She received the M.S. degree in Electrical Engineering from the University of Kansas, United States in 1995 and the PhD degree in Electrical Engineering from McGill University, Canada in 2004.

She is Dean of the School of Engineering at Makerere University. She is also the Principal Investigator of netLabs!UG, a telecommunications and networking technologies research center based at the University.

She is a member of the Uganda Institution of Professional Engineers (UIPE) where she served as President from 2016 to 2018. Dr. Okello served on the 2016-2019 IEEE Ad Hoc Committee for Africa (AHCA). Her research interests are in rural broadband connectivity, with a focus on wireless communications and networking and societal technology.
Email: dkokello@cedat.mak.ac.ug.

Edwin Mugume (S'12-M'17) received the BSc degree in Electrical Engineering (First Class Honors) from Makerere University, Uganda in 2007. He received the MSc degree in Communication Engineering (Distinction) in 2011 and the PhD in Electrical and Electronic Engineering in 2016, both from the University of Manchester, United Kingdom.

Since 2017, he has been with the Department of Electrical and Computer Engineering, Makerere University in Kampala, Uganda. He is a Senior Researcher with netLabs!UG, a telecommunications and networking technologies research center based at Makerere University. He is also an Instructor at Carnegie Mellon University Africa in Kigali, Rwanda. His research interests include energy efficient dense HetNets, 5G cellular technologies, UAV-based cellular systems, and applications of machine learning in wireless networks and systems.
Email: edwin.mugume@cedat.mak.ac.ug.