

1. **Research Group Name:** netLabs!UG

Acronym: netLabs!UG

Group Leader: Dorothy K. Okello (Assoc. Prof), 0772957550, dorothy.okello@mak.ac.ug

Group Members: Assoc. Prof. Dorothy Okello, Dr. Jonathan Serugunda, Dr. Edwin Mugume, Dr. Andrew Katumba, Dr. Roseline N. Akol, Ms. Berna Namulyowa, Mr. Alexander Muhangi, Mr. Simon Masombo, Mr. Wayne Okello, Mr. Abdu-Noor Kalibbala, and Ms. Gorret Namulondo.

Pending Group Members:

Group Description

netLabs!UG is a multi-disciplinary research group established at the College of Engineering, Design, Art and Technology, School of Engineering, Makerere University. Its researchers focus on a range of areas in both basic and applied research. The main areas of research are network technologies, Internet of Things and its applications in various sectors, and Machine Learning and its applications. The group developed out of the original Community Wireless Resource Center (CWRC) as its areas of research expanded from just focusing on rural community wireless networks. However, broadband provision frameworks in rural and underserved settings continue to be a major component of the group's research and significant contributions have been registered in this particular area.

2. **Research Group Name:** Energy and Power System Engineering Solutions

Acronym: EPSES

Group Leader: Emmanuel Wokulira Miyingo, 0782423774, miyingo@yahoo.com

Group Members: Prof. Dorothy Okello, Prof. John Baptist Kirabira, Dr. Emmanuel Wokulira Miyingo, Dr. Emmanuel Menya, Dr. Patrick Ssebugere, Dr. Joseph Ddumba Lwanyaga, and Mr. David Sunday Tsubira

Pending Group Members: five more members accepted to join the group, but have not yet provided their respective details

Group Description

This is a multi-disciplinary research group established at the College of Engineering, Design, Art and Technology, School of Engineering, Makerere University. Its research is geared towards energy and power, environmental sustainability, material science, STEM education, productive use of energy, application of Internet in energy-power and agriculture, agricultural value chain support, to mention a few. It was created by a team of researchers with diverse research experiences and varying backgrounds. The aim of the group is to contribute to sustainable living

through innovative solutions by bringing together a number of vibrant researchers with related ambitions. The idea of creating this research group arose out of the need to tackle challenges facing humanity relating to climate change and its associated negative effects by developing appropriate and innovative solutions. The energy, food, and water nexus is very important in its research agenda, and the group appreciates that those three fundamental resources are quite difficult to pursue in isolation.

3. **Research Group Name:** Integrated Smart Systems Group

Acronym: ISSG

Group Leader: Dr. Jonathan Serugunda, 0776601601, serugthan@gmail.com

Group Members: Dr. Jonathan Serugunda, Dr. Edwin Mugume, Dr. Abubaker Matovu Wasswa, Prof. Dorothy Okello, Dr. Milton Edimu, Dr. Jane Namaganda Kiyimba, Mr. Tonny Ssetumba, Ms. Charlene Nagawa, and Mr. Alvin Mulumba. The group also includes a talented team of undergraduate and master's students.

Group Description

ISSG is a dynamic research consortium within the College of Engineering, Design, Art, and Technology, Makerere University. Dedicated to fostering interdisciplinary collaboration, ISSG seeks to seamlessly integrate various specializations of engineering, including but not limited to Internet of Things (IoT), power systems, electronics, artificial intelligence, biomedical systems, telecommunication systems, and energy. The primary goal is to establish a cohesive engineering unit that amplifies the intelligence of a system to ensure ease of use, resilience and sustainability.

4. **Research Group Name:** Marconi Research and Innovations Lab

Acronym:

Group Leader: Dr. Andrew Katumba,

Group Members: Dr. Andrew Katumba, Dr. Cosmas Mwikirize, Dr. Jonathan Serugunda, Dr. Edwin Mugume, Prof. Dorothy Okello, Dr. sc. Jan Mikelson, Winfred Jenifer Namuyanja

Group Description

The Marconi Lab is a Research and Innovation Laboratory based at the College of Engineering, Design, Art & Technology, Makerere University. We are pioneering a data-driven future through research and solutions developed with technologies including; Artificial Intelligence, IoT, Space Technology, Software Engineering, Cloud Computing, and Blockchain.

5. **Research Group Name:** iLabs@MAK

Acronym: iLabs@MAK

Group Leader: Assoc Prof Peter Lating

Group Members:

Group Description

iLabs@MAK comprises student developers (both Graduate and Undergraduate) and members of staff from the Faculty of Technology. The student developers carry out research in development of new labs to support curricula of the Bsc. Electrical, Telecommunications and Computer Engineering Programmes. To date, laboratories have been developed supporting experimentation in the fields of Digital circuit analysis, Amplitude/Frequency Modulation, Pulse Code Modulation and Digital Data Transmission. These experiments are used in the courses of Introduction to Digital Electronics (1st year), Applied Digital Electronics, Basic Telephony and Communication Theory I (3rd year). The ongoing research seeks to develop laboratories supporting the fields of Digital Signal Processing, Embedded Systems, Fiber Optic Systems, and Control Systems Engineering.