# MAKERERE UNIVERSITY

## 63rd GRADUATION BOOKLET

**The Principal, College of Computing and Information Science to present the following for the**
**Conferment of the Degree of Doctor of Philosophy (Information Science)**

KINENGYERE Alison Annet (Ms)

**"Utilisation of electronic health information resources in Universities in Uganda"**

Ms. Kinengyere investigated the utilization of electronic health information resources (e-resources) in selected Universities offering medical education in Uganda. While e-resources support learning, teaching, research, their usage by students, academic staff and researchers was found to be relatively low. The study started from the premise that improved usage of the resources promotes access to relevant and timely information, and ultimately effective healthcare services delivery. Strategies for improved usage of the costly resources, such as integration of information literacy into the curriculum, and setting minimum standards for libraries in upcoming institutions of higher learning were suggested. It is therefore anticipated that the research will inform policy regarding these strategies. A health information utilization model was developed, which adds to theory and the existing body of knowledge in Library and Information Science.

**The Principal, College of Computing and Information Science to present the following for the**
**Conferment of the Degree of Doctor of Philosophy (Information Technology)**

NAZIR Ahmad Suhail

**"Optimization Based Blended Learning Framework for Constrained Bandwidth Environment"**

Mr. Suhail Ahmad developed a novel blended learning framework that addressed the most critical issue not addressed by the existing blended frameworks, by optimizing network efficiency and multimedia (learning content) performance. The issue is a barrier towards the adoption of new teaching and learning approach at higher education in developing countries. The framework emphasizes that performance of multimedia can be improved when network and application are both optimized, in return that would increase the perceived level of user satisfaction, enhancing the blended learning process in LDCs. And increasing the perceived level of user satisfaction in LDCs is a big mile stone indeed. The novelty of this research is that it linked practical with theoretical foundation and relevant literature, aimed to make both scientific and practical contribution, and laid the foundation stone for further research in the area to make subsequent developments.

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**Conferment of the Degree of Doctor of Philosophy (Computer Science)**

WAKABI Waiswa Peter Patrick

**“Association Rule Mining Using Evolutionary Computing”**

Mr Wakabi’s research focused on the applicability of multi–objective genetic algorithms to the association rule mining problem of the knowledge discovery and data mining processes. The exponential growth of the number of rules in large databases makes the association rule mining algorithms to be computationally very expensive and face scaling difficulties with increasing dimensionality. By developing new rule quality metrics in combination with query–based dimensionality reduction techniques and dynamic allocation of fitness cases, a new scalable inexpensive approach to generating optimal association rules has been introduced. This approach was successful in significantly improving the efficiency of the algorithm. A number of exemplar rules discovered were found easily interpretable, understandable and interesting by the domain experts.

**Conferment of the Degree of Doctor of Philosophy (Computer Science)**

OKORI Washington