8th African Conference on Information Systems & Technology (ACIST) 2022

25th – 26th August 2022, Blantyre, Malawi & Virtual

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Meeting ID: 933 3714 8502
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Host:

Dept. of Computer Science & Information Technology

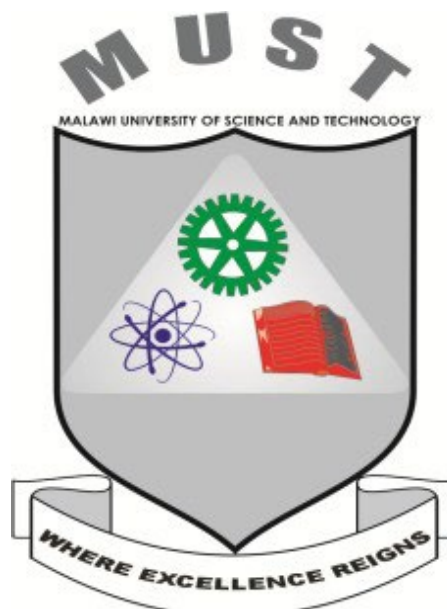## Malawi University of Science & Technology, Malawi

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WELCOME

On behalf of the Organizing, Programme and Local Organizing Committees, plus other staff of MUST who have been working diligently and effectively from last year, we welcome you to the 8th African Conference on Information Systems & Technology (ACIST) 2022.

The aim of ACIST is to provide a forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, experiences and concerns in all kinds of technology. Discussions cover information and communication technology (ICT) and allied areas such as electrical and electronic engineering, computer science, computer engineering, and information systems.

Its theme, the Digital African is a reference to an African who has become a digital citizen because of integration of digital technology to support all aspects of his or her socio-economic life. Currently, there are a significant number of Africans who have attained various levels of digital citizenship. At the same time, there are also a significant number of Africans who are not yet digital citizens. Even among those who are digital citizens, many are not conscious of this citizenship because they have taken it for granted. For this reason, many Africans are quite oblivious to the key issues in digital citizenship even though knowledge of these issues in this age contributes significantly to African progress.

The key digital citizenship issues include access, communication, literacy, security and safety, ethics, education, government, rights and responsibilities, law, health, infrastructure, financial inclusion, and commerce. The more Africans understand, think, and apply these key issues, the more they increase their digital citizenship level. And as many of us are becoming Digital Africans, we acquire knowledge and skills which are critical in this age to make significant contributions to African progress.

However, the efforts required to make many more digital Africans is huge because there are many socio-economic obstacles in our way. Thankfully, many efforts are being made in this direction including the efforts of Information Systems & Technology scholars in Africa.

The 2022 (8th) edition of ACIST invited scholars to share ideas, based on research, about the making of The Digital African from many different theoretical, philosophical, policy and practical perspectives.

31 full papers were submitted by the deadline. These full-paper submissions were subjected to *blind reviews by at least two reviewers* of which 24 were accepted for presentation, after revisions were made as suggested by reviewers.

Accepted full papers published in the conference proceedings will be available through https://acistonline.org/ with **ISSN 2467-8988.**

The issues raised by our theme are of theoretical, empirical, and practical importance across academic, industry and policy groups. ACIST 2022 therefore offers many opportunities to learn from the research presentations and panel discussions which have been scheduled in the programme.

We hope that you enjoy your time and experience during the conference which is both in-person and virtual this year. We hope you enjoy your visit to Malawi for those attending in-person.

On behalf of all committees, thank you for all valuable discussions about research, teaching and practice during the conference. We hope you will have an excellent learning experience at ACIST 2022.

Bennett Kankuzi, *Dept. of Computer Science & Information Technology, MUST, Malawi*
Gamel O. Wiredu, *Dept. of Information Systems & Innovation*, *GIMPA, Ghana*
Wallace Chigona, *Dept. of Information* Systems, *UCT, South Africa*
Irwin Brown, *Dept. of Information* Systems, *UCT, South Africa*
**Solomon Negash*, *Dept of Information Systems, Kennesaw State University, USA*

COMMITTEES

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Wallace Chigona	*Conference Co-Chair*	*University of Cape Town, South Africa*
Bennett Kankuzi	*Conference Co-Chair*	*Malawi University of Science & Technology, Malawi*
Menard Phiri	*Local Organizing Chair*	*Malawi University of Science & Technology, Malawi*
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Current Academic Programmes
- BSc in Business Information Technology
- BSc in Computer Systems and Security
- MSc in Computer Science
- MSc in Data Science
- MSc in Information Technology

Short Courses
- Certificate in Fiber Optic Networking
- Certificate in Programming using Python
- Certificate in Database Security
- Certificate in Linux Server Administration
- Certificate in Information Systems Auditing

SCHEDULE

Day 1: Thursday 25th August 2022		
Time	**Activity/Topic**	**Presenters**
9:00 – 9:25am	Conference Opening	MUST Vice Chancellor, Prof. Address Malata
9:25 - 10.05am	Keynote Address: Digitizing communities, creating opportunities and transforming lives	Phyllis Manguluti *Chief Customer Officer, Telekom Networks Malawi plc*
Tea/Coffee Break		
Paper Presentation Session 1 – Chair: Priscilla Maliwichi		
10:30 – 10:55am	Factors affecting the adoption of information and communication technologies in Africa: literature review	Edison Wazoel Lubua, UTMU, Uganda
10:55 – 11:20am	A critical assessment of the ICT regulatory transparency gap in Zimbabwe	Casper Chigwedere, Sam Jnr Takavarasha, Bonfac`e Chenjerai Chisaka, WUA, Zimbabwe
11:20 – 11:45am	Access to technology and data in smart cities for South African digital citizens	Brenda Scholtz, Anthea Van Der Hoogen, NMU, South Africa
11:45 – 12.10pm	Factors affecting compliance with the national cybersecurity policy by SMMES in developing countries: a case of South Africa	Caitlyn Murphy, Chimwemwe Queen Mtegha, Wallace Chigona, Teofelous Tonateni Tuyeni, UCT, South Africa
12:10 – 12:35pm	Covid-19 pandemic digital technology innovations and resilience in South African higher education institutions	Vusumzi Funda, UFH, South Africa
LUNCH		
Paper Presentation Session 2 – Chair: Patrick Chikumba		
2.00 – 2.25pm	Students' acceptance and use of a mobile instant messenger for remote learning during Covid-19: large information systems class in South Africa	Fazlyn Petersen , Nathan Anthony Davids, UWC, South Africa
2.25 – 2.50pm	The impact of mobile banking customer experience on loyalty among millennials in South Africa	Justice Ncube, Salah Kabanda, UCT, South Africa
2.50 – 3.15pm	Characterization of end-users' engagement and interaction experience with social media technologies	Yemisi Oyedele, Darelle Van Greunen, NMU, South Africa
3.15 – 3.40pm	Users' expectations as determinants of continuance intention towards mhealth in Malawi	Donald Flywell Malanga, Wallace Chigona, UL, Malawi
3.40 – 4.05pm	Towards inclusive electronic tutoring: tutors' experiences of using a data-free mobile instant messenger in a large accounting class	Fazlyn Petersen , Ronald Arendse, UWC, South Africa
Tea/Coffee Break		
Paper Presentation Session 3 – Chair: Sam Takavarasha		
4.30 – 4.55pm	A structural equation model for implementation of smart card technology in public healthcare	Lario Malungana, Lovemore Motsi, UNISA, South Africa
4.55- 5.20pm	Extrinsic motivation to use mhealth interventions in maternal healthcare in rural Malawi	Priscilla Maliwichi, Wallace Chigona, Address Malata, UCT, South Africa
End of 1st Day Activities		

Day 2: Friday 26th August 2022		
Time	**Activity/Topic**	**Presenters**
9:00 – 10.00am	Keynote Address: 'African Vibes'	Gertjan van Stam *Transdisciplinary Researcher, Zimbabwe*
Tea/Coffee Break		
Paper Presentation Session 4 – Chair: Florence Nkosi		
10:30 – 10:55am	Factors that influence the implementation of inclusive design practices in organisations.	Faizel Ebrahim, Salah Kabanda , Guidance Fayisa Mthwazi, UCT, South Africa
10:55 – 11:20am	Students' perceptions of designing mobile application prototypes for social innovation: case study during a global pandemic	Fazlyn Petersen , Muhammad Ziyaad Behardien, UWC, South Africa
11:20 – 11:45am	Using design science research to create a virtual environment for nursing students	Benjamin Botha, Lizette De Wet, UFS, South Africa
11:45 – 12.10pm	Road traffic accidents severity modelling in Malawi	Chikumbutso Felix Phiri, Kondwani Munthali, Yamikani Phiri, UM, Malawi
12:10 – 12.35pm	Towards a career prediction model for subject selection at advanced level of secondary education	Moses Kamondo Tuhame, Gilbert Maiga , Annabella Habinka , Barbara Kayondo, UM, Uganda
LUNCH		
Paper Presentation Session 5 – Chair: Hossana Twinomurinzi		
2.00 – 2.25pm	A theoretical framework for m-learning	Osman Sadeck, Moses Moyo, Nyarai Tunjera, Agnes Chigona, CPUT, South Africa
2.25 – 2.50pm	Adapting an online learning quality assurance framework in a developing country setting: the case of a HEI in Malawi	Bennett Kankuzi, Menard Phiri, Robert Chanunkha, Jonathan Makuwira, Paul Makocho, MUST, Malawi
2.50 – 3.15pm	Developing a model to calculate feasible capacity to work-from-home	Ryan Tripod, Sumarie Roodt, UCT, South Africa
3.15 – 3.40pm	Disciplinary emphases of data science curricula in South Africa	Hossana Twinomurinzi, Siyabonga Mhlongo, Kelvin J. Bwalya, Tebogo Bokaba, Steven Mbeya, UJ, South Africa
3.40 – 4.05pm	Towards a model on digital transformation within the higher education sector – a South African perspective	Olusegun A. Ajigini, IIE, South Africa
Tea/Coffee Break		
Paper Presentation Session 6 – Chair: Donald Malanga		
4.30 – 4.55pm	The status of adoption of social media analytics: three cases in South African and German government departments	Khulekani Yakobi , Brenda Scholtz, NMU, South Africa
4.55-5.20pm	Role of industry technologies in information systems education	Shaloam Mutetwa, Gwamaka Mwalemba, UCT, South Africa
Close		

KEYNOTE ADDRESSES

KEYNOTE ADDRESS 1

Ms Phyllis Manguluti
Chief Customer Officer
Telekom Networks Malawi plc

Topic: Digitizing communities, creating opportunities and transforming lives

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Biography:

An accomplished member of Executive management of TNM plc that offers 22 years' continued and combined experience with success in the areas of planning, executing and negotiating at various Organizational levels. Has 8 years' experience of board leadership; including providing oversight to sub-committees. Currently, sits on the boards of Malawi Energy Regulatory Authority (MERA) as Vice Board Chairperson, Habitat for Humanity Malawi, Girls Youth Foundation for Africa and Apple of His Eye Africa. Was also once on the boards of Old Mutual TNM Pension Fund and Green Energy. A Master of Business Administration, an Electrical and Electronic Engineer, an awardee from STEM in the field of Science, a motivational and inspiring leader. Currently works as Chief Customer Officer, strategically responsible for Customer Service, Customer Experience and Partnerships. Once worked as Chief Regional Operations Officer overseeing Commercial, Technical, Finance and Admin as well as Customer services Operations for 4 Regions. Also worked as Chief Channels Officer, Managing Executive for Operations, Managing Executive for Customer Services as well as the Head of Network Management Centre where she played an instrumental role in setting up the Network Management system using an integrated solution. Other corporate roles include Regional Technical Manager for Central and Northern Region. On the international scene, she was also the first woman Consultant to have successfully led a telecommunication engineering project in Yemen in the year 2007.

Dr. Gertjan van Stam
Transdisciplinary Researcher, Zimbabwe

Topic: 'African Vibes'

Biography:

Gertjan van Stam engages in a diverse portfolio of activities, among which consultancy in digital health in Southern Africa and Europe. He has been involved with strategic developments in Information and Communication Technologies, the Built Environment, digital transformation and digital health, and culture studies since 1987. He holds a Doctor of Philosophy from Tilburg University – the Netherlands, (PhD, Culture Studies), a Master of Technology in Information Technology (MTech, cum laude) from Nelson Mandela University – South Africa, and an engineering degree in telecommunications.

In his activities, Gertjan deploys dynamic and integrative analysis embedded in both the humanities and natural sciences at the intersection of technology and society focusing on meaning-making and embodiment. Harvesting from extended case studies, he contributes on the cognitive and epistemological connection between technology and culture. Gertjan's goal is to co-develop insights on contrapuntal developments and to identify and inspire local talent. He proposes conceptual frameworks that move the discourse on technology and society to a nuanced continuum through inclusive narratives that celebrate diversity/pluralism in meaning-making, knowledge production and dissemination.