

9th African Conference on Information Systems & Technology (ACIST) 2023

14th – 15th September 2023, Harare, Zimbabwe (Monomotapa Hotel) &
Virtual

Host:

Women's University in Africa, Zimbabwe



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WELCOME

On behalf of the Organizing, Programme and Local Organizing Committees, plus other staff of WUA who have been working diligently and effectively from last year, we welcome you to the 9th African Conference on Information Systems & Technology (ACIST) 2023.

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 Rapid Digital Innovation and African Coping is a reference to rapid digital innovations which Africa and the world at large have experienced since the 1990s. Other innovations in artificial intelligence (AI), digital infrastructure, and big data are all at the cutting edge, inducing considerable social and economic changes in Africa. Whether Africans have coped quickly or slowly with these rapid digital innovations, any coping is never a straightforward issue especially because of the African background.

In the African background are strong natural, historical, cultural, linguistic and philosophical deposits which have been evoked variously to cope with rapid digital innovations. There have been forms of coping which embrace these innovations for what is famously called digital transformations of individuals, organizations, nations, and the continent as a whole. There have been forms of coping which resist, delay, keep at arm's length, or even refuse some of these innovations entirely. This is because they, especially AI technologies, are perceived as threats to African lives. There have also been forms of coping in terms of financial and infrastructural struggles to access such new technologies, leaving many societies to lag in terms of adoption.

Still, rapid digital innovation and integration into Africa is a very real reality. Similar to the colonial onslaught that swept the continent in the late nineteenth century, the adoption of digital technologies seems inevitable for many African societies. Therefore, the pressing question now is mostly about African coping in key battlegrounds such as governance, culture, language, education, ethics, law, development, medicine, academia, economics, and agriculture. In order to maintain and develop African identities in the face of rapid digital innovation, how are we coping and how should we be coping? Thankfully, many efforts are being made in this direction including the efforts of Information Systems & Technology scholars in Africa.

The 2023 (9th) edition of ACIST invited scholars to share ideas, based on research, about Rapid Digital Innovation and African Coping from many different theoretical, philosophical, policy and practical perspectives.

49 full papers were submitted by the deadline. These full-paper submissions were subjected to **double-blind reviews by at least two reviewers** of which 34 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 2023 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 Zimbabwe 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 2023.

Sam Takavarasha Jr., *Dean of Faculty of Management and Entrepreneurial Sciences at Women's University in Africa, Zimbabwe*

Casper Chigwedere, *Women's University in Africa, Zimbabwe*

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Irwin Brown, *Dept. of Information Systems, UCT, South Africa*

Solomon Negash, *Dept of Information Systems, Kennesaw State University, USA*

Bennett Kankuzi, *Dept. of Computer Science & Information Technology, MUST, Malawi*

COMMITTEES

Conference Co-Chairs

Gamel Wiredu	<i>Conference Co-Chair</i>	<i>Ghana Institute of Management & Public Administration (GIMPA), Ghana</i>
Sam Takavarasha Jr.	<i>Conference Co-Chair</i>	<i>Women's University in Africa, Zimbabwe</i>
Casper Chigwedere	<i>Local Organizing Chair</i>	<i>Women's University in Africa, Zimbabwe</i>
Wallace Chigona	<i>Programme Chair</i>	<i>University of Cape Town, South Africa</i>
Irwin Brown	<i>Publications & Proceedings Chair</i>	<i>University of Cape Town, South Africa</i>

Local Organising Committee

Casper Chigwedere	<i>Women's University in Africa, Zimbabwe</i>
Cross Gombiro	<i>University of Zimbabwe, Zimbabwe</i>
Fine Masimba	<i>Catholic University of Africa, Zimbabwe</i>
Unice Goshomi	<i>Women's University in Africa, Zimbabwe</i>
Theo Tsokota	<i>Midlands State University, Gweru, Zimbabwe</i>
Tavengwa Masamha	<i>Chinhoyi University of Technology, Zimbabwe</i>
Lucy Sakala	<i>Bindura University of Science Education</i>
Gilford Hapanyengwi	<i>Zimbabwe Council of Higher Education</i>

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Reviewer	Affiliation
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Andile Metfula	<i>University of Eswatini</i>
Barabara Naluwada	<i>University of Cape Town</i>
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Bojelo Mooketsi	<i>University of Botswana</i>
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Frank Makoza	<i>Cape Peninsula University of Technology</i>
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Ihab Alagha	<i>University of Cape Town</i>
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Zane Davids	<i>University of Cape Town</i>
Zoran Mitrovic	<i>Cape Peninsula University of Technology</i>

Acknowledgements:

We express our gratitude to our Webmasters:

- Heather Hankins (Kennesaw State University, USA)
- Kofi Arhin (Lehigh University, USA)

SCHEDULE

Day 1: Thursday 14th September 2023

Time	Activity/Topic	Presenters	Activity/Topic	Presenters
Plenary: Click here to join the meeting		Meeting ID: 356 525 757 66		Passcode: SN9biV
9:00 am	Conference Welcome		Conference Co-Chair: Dr. Sam Takavarasha	
	Opening Address		Women's University in Africa Vice Chancellor: Prof S.D. Chingarande	
9:30 am	Keynote Address:		Chief Operating Officer, Econet Wireless: Mr. Kezito Makuni	
10:30 am	Tea/Coffee Break			
11:00 am	Panel Discussion: General Purpose Chatbots (e.g. ChatGPT) and Impact on Higher Education		Dr. Panashe Chiurunge , Data Analyst; Mr. Masimba C. Muzinga , Information Systems Librarian; Prof Hossana Twinomurinzi , Vice Dean Research, UJ; Dr. Gilford T. Hapanyengwi , Data Analyst and Databases	
	Venue A: Click here to join the meeting Meeting ID: 356 525 757 66 Passcode: SN9biV		Venue B: Click here to join the meeting Meeting ID: 338 801 553 690 Passcode: fFKanC	
	Session 1A, Venue A, Session Chair: Gilford Hapanyengwi		Session 1B, Venue B, Session Chair: Guidance Mthwazi	
12:00 pm	A Customized Artificial Intelligence Based Career Choice Recommender System for a Rural University	Nosipho Carol Mavuso , <i>Nelson Mandela University</i> ; Nobert Jere , <i>Walter Sisulu University</i> ; Darelle van Greunen , <i>Nelson Mandela University</i>	An Assessment of the Consistency Gap in Developing Countries: A Case of Zimbabwe's ICT Regulatory Framework	Casper Chigwedere , <i>Women's University in Africa</i>
12:30 pm	Information Technology decision makers' readiness for artificial intelligence governance in institutions of higher education in South Africa	John Mangundu , <i>University of the Witwatersrand</i>	Benefits and Barriers of Using WhatsApp In Eye Health Communication in Deprived Settings in India	Chandrani Maitra , <i>Manchester Metropolitan University</i>
1:00 pm	Lunch Break			

	Session 2A, Venue A, Session Chair: Irwin Brown		Session 2B, Venue B, Session Chair: Hossana Twinomurizi	
2:00 pm	Factors influencing the establishment of technology innovation hubs - a structured literature review	Oluwaseun Alexander Dada and Jean-Paul Van Belle , <i>University of Cape Town</i>	Adoption of ICT to support rural small-holder farmers : A Systematic Review	Abdus Salaam Seat, Shaun Pather , <i>University of the Western Cape</i>
2:30 pm	E-Wild Life Alert: Tackling the Human-Wildlife Conflict Problem	Eliel Kundai Zhuwankinyu, Sibonile Moyo, Catherine Chivasa, Smart Ncube , <i>National University of Science & Technology</i>	When Social Media Fails: Exploring Alternative Technologies for Effective Communication in Disasters	Safianu Omar, Jean-Paul Van Belle , <i>University of Cape Town</i>
3:00 pm	Predictive maintenance of base transceiver station power system using XGBoost algorithm: A case study of Econet Wireless, Zimbabwe	Tavengwa Masamha, Chinhoyi , <i>University of Technology</i>	Experiences of African women in STEM careers: A systematic literature review	Kaluwa Siwale, Gwamaka Mwalemba, Ulrike Rivett , <i>University of Cape Town</i>
3:30 pm	Tea/Coffee Break			
	Session 3A, Venue A, Session Chair: Irwin Brown		Session 3B, Venue B, Session Chair: Theo Tsokota	
4:00 pm	Benefits of adopting micro-credentials for skills development	Oyena Nokulunga Mahlasela, Adriana Steyn , <i>University of Pretoria</i>	Factors Influencing the Retention of Millennial Software Developers in South African Companies	Kim Fouche, Maureen Tanner , <i>University of Cape Town</i>
4:30 pm	Factors influencing remote working for facilitators in under resourced universities	Anelisa Tyutyu, Salah Kabanda, Guidance Mthwazi , <i>University of Cape Town</i>	A social profile-based e-learning model	Xola Ntlangula , <i>University of the Witwatersrand</i>
5:00 pm	Factors influencing attitudes of workers in the work from home environment in South African Organisations	Kirin Maharaj, Guidance Mthwazi, Adheesh Budree , <i>University of Cape Town</i>	Internet of Things Affordance for Open Educational Resources in a Comprehensive Open Distance E-learning	Lancelord Mncube , <i>University of South Africa</i>

Day 2: Friday 15th September 2023

Time	Activity/Topic	Presenters	Activity/Topic	Presenters
Plenary: Click here to join the meeting		Meeting ID: 356 525 757 66		Passcode: SN9biV
9:00 am	Conference Chair Reports		Prof Wallace Chigona, Prof Irwin Brown	
9:30 am	Panel: Decolonising IS Curriculum		Adheesh Budree, UCT; Joseph Budu, GIMPA; Avantika Tewari, IT for Change; Abri Hoffman, Da Vinci Institute; Gwamaka Mwalemba, UCT	
10:30 am	Tea/Coffee Break			
	Venue A: Click here to join the meeting Meeting ID: 356 525 757 66 Passcode: SN9biV		Venue B: Click here to join the meeting Meeting ID: 338 801 553 690 Passcode: fFKanC	
	Session 4A, Venue A, Session Chair: Tavengwa Masamha		Session 4B, Venue B, Session Chair: Unice Goshomi	
11:00 am	Digital Transformation of SMEs through social media	Georgette Eugenia Otoo, Raphael Amponsah, Eric Afful-Dadzie, Emmanuel Awuni Kolog, Ghana Institute of Management and Public Administration	The impact of an online Self-Regulation Clean Teaching tool on student performance in large computer programming class. A case of Zimbabwean Higher and Tertiary education	Tirivashe Mafuhure, Gabriel Kabanda, Maria Tsvere, University of Zimbabwe
11:30 am	The Impact of Digital Transformation on Institutional Growth. A Case of Zimbabwean Universities	Vusumuzi Maphosa, National University of Science and Technology	Codesigning A Big Data Analytic Tool for Girl Child Learner Drop Out from Eastern Cape Province -South Africa	Nobert Rangarirai Jere, Walter Sisulu University; Nosipho Carol Mavuso, Walter Sisulu University; Nelly Sharpley, University of Kwazulu Natal
12:00 pm	Digital Transformation in Government: A Bibliometric Scoping of African Aspirations and the Realities	Hossana Twinomurinzi, Sibukele Gumbo, University of Johannesburg	The state of the digital skills ecosystem in Zimbabwe: An exploratory analysis	Annette Mangena, Gwamaka Mwalemba, University of Cape Town
12:30 pm	Mapping the Way Forward for Post Pandemic Digitalization of Higher Education Administration, Teaching and Learning: A Systematic Literature Review	Barbara Tsverukayi, Sam Takavarasha, Women's University in Africa	Social Media & Privacy: Understanding Privacy in The Age of Content Creator Culture	Robert Tagoe, Ghana Institute of Management and Public Administration, Raphael Amponsah, Ghana Institute of Management and Public Administration Emmanuel Awuni Kolog, University of Ghana; Eric Afful-Dadzie, University of Ghana
1:00 pm	Lunch Break			

	Session 5A, Venue A, Session Chair: Irwin Brown		Session 5B, Venue B, Session Chair: Guidance Mthwazi	
2:00 pm	The Sharing Economy: Understanding the Affordances of and Barriers to the use of Digital Platforms	Phaswana Malatjie, Lisa Seymour, <i>University of Cape Town</i>	Determinants that affect information security awareness and behavior: A systematic literature review	Abdurehman Ali, <i>Addis Ababa University</i> ; Solomon Negash, <i>Kennesaw State University</i>
2:30 pm	The dark side of Mobile Money Transfer : A case study of Zimbabwe	Theo Tsokota, Collector Chipfumbu, Melody Maseko, <i>Midlands State University</i>	Factors Influencing User Adherence towards Privacy Standards of Internet of Things Devices	Philip Bazanye, Walter Uys, Wallace Chigona, <i>University of Cape Town</i>
3:00 pm	Trust the Masked Stranger: Unveiling the African Stokvel's Blockchain Enticement	Norwell Zhakata, Ntombovuyo Wayi-Mgwebi, <i>University of Mpumalanga</i>	Blended learning in the wake of ICT infrastructure deficiencies: The case of a Zimbabwean University	Lucia Makwasha, Sam Takavarasha, Hazel Mubango, <i>Women's University in Africa</i>
3:30 pm	Tea/Coffee Break			
	Session 6A, Venue A, Session Chair: Theo Tsokota		Session 6B, Venue B, Session Chair: Hossana Twinomurinzi	
3:45 pm	Transforming Card Systems Reliability: The Impact of Cloud Computing Adoption and Use in a South African Bank	Ansel Nhapi, Nozibele Gcora-Vumazonke, <i>University of Pretoria</i>	Developing an Integrative Theoretical Framework for Electronic Business Value Optimisation in Botswana	Meduduetso Tsumake-Tsiang, Adheesh Budree, <i>University of Cape Town</i>
4:15 pm	Exploring the role of an organization in implementing a Work-From-Home Strategy	Ryan Tripod, Sumarie Roodt, <i>University of Cape Town</i>	A Neuro-robotic Prosthetic Arm (Ruoko bot)	Fungai Jacqueline Kiwa <i>Chinhoyi University of Technology...</i>
4:45 pm	Close			