

WCCE Program

19 – 22 October 2026

Full paper presentation duration: 15 Minutes

Short paper presentation duration: 10 Minutes

Important: All presentations will be run from a central drive. We therefore ask all presenters to submit their presentation slides at the conference reception the day before their presentation.

DAY 1 - MONDAY OCT 19

09:15 – 10:15	Opening Ceremony (Plenary Hall: Nari & Ndau)
10:15 – 11:15	Keynote & Discussion 1 (Plenary Hall: Nari & Ndau) Speaker: Mrs. Joice Benza (Online Stream) Title: 'Socio-Technical Landscapes and the Connected Future of Learning'. Chaired by Professor Don Passey
11:15 – 11:30	Coffee & Networking Break
11:30 – 13:15	TRACK A: POLICY, STRATEGY & DIGITAL GOVERNANCE (INGWE ROOM) Chair: Deirdre Butler
11:30 – 13:15	AI Policy Implementation at School in International Comparison: Empirical Findings Based on ICILS Jan Niemann, Marius Domke, Kerstin Drossel and Birgit Eickelmann
11:30 – 13:15	Parents' and Educators' Attitudes and Concerns about Smartphones in South African High Schools Daniel Le Roux and Lana de Jong
11:30 – 13:15	To Ban or Not to Ban Smartphones and Restrict Digital Access: Ireland's Policy Dilemma Deirdre Butler and Margaret Leahy
11:30 – 13:15	The Urban–Rural Digital Divide in School Education: A Secondary Analysis of ICILS Data in an International Comparison Kerstin Drossel, Birgit Eickelmann and Jan Niemann
11:30 – 13:15	Advances in the Use of Information Technology in School Management over the Years: An Analysis Using Actor-Network Theory Arthur Tatnall and Javier Osorio
11:30 – 13:00	TRACK B: DIGITAL EQUITY, ACCESS & RURAL EDUCATION (MHELEMBE ROOM) Chair: Amina Charania
11:30 – 13:15	Newly qualified teachers' preparedness to teach with and through affordable digital technologies in marginalised communities in post-Covid-19 Agnes Chigona
11:30 – 13:15	Empowering Rural Education Through Digital Teaching and Learning Practices: A case in Nepal Sojen Pradhan, Max Hendriks and Sanjay Lama
11:30 – 13:15	Educators' readiness to impart cybersafety skills in connected learning: The case of marginalised schools Caroline Magunje and Wallace Chigona
11:30 – 13:15	Child Identity Fraud in the Era of Connected Learning Cynthia Sthembile Ntshangase and Adriana A Steyn
13:15 – 14:15	Buffet Lunch (Conference Restaurant)
14:15 – 16:00	TRACK C: CONNECTED LEARNING & PEDAGOGY IN AI ERA (INGWE ROOM) Chair: Torsten Brinda
14:15 – 16:00	When Connection Requires Refusal: Technology Back-lash, AI and the Future of Connected Learning Jason Zagami
14:15 – 16:00	AI-Mediated Connected Learning: Pedagogical Design and Teacher Identity Formation Jason Zagami
14:15 – 16:00	AI Literacy and the development of Pedagogical Content Knowledge in the Age of Generative AI Mary Webb, Kathryn MacCallum, Jodie Torrington, Deirdre Butler, Chris Shelton, Jihyun Lee, Tanya Linden, Jonathan D. Cohen, Ana Amélia Carvalho, Matt Bower and Fredrik Mørk Røkenes

14:15 – 16:00	Assessing What Matters in the Age of AI: A Comparative Analysis of Global Competencies in Final-Year Computing Exams in Australia and the United Kingdom Jackson Clayton, Therese Keane and Milorad Cerovac
14:15 – 16:00	Toward Adaptive Mathematics Learning Environments: Insights from a Systematic Review of Game-Based Learning and Social Robots Cherry Demir, Therese Keane and Milorad Cerovac
14:15 – 16:00	TRACK D: TANGIBLE CODING, GAME-BASED & PRIMARY CS (MHELEMBE ROOM) Chair: Lizette Weilbach
14:15 – 16:00	Coding Without Computers: A Thematic Analysis of Teacher Attitudes Before and After a Tangible Coding Workshop Using the Rangers Game Jean Greyling, Andre Calitz and Margaret Cullen
14:15 – 16:00	Comparing South African primary school teachers' tangible coding teaching practices across different socio-economic contexts Sumaiya Ismail and Machdel Matthee
14:15 – 16:00	What Makes a Context Work? Teachers' Perspectives on Everyday-Life References for Computer Science-related Learning in Primary Schools Felix Ziemann and Torsten Brinda
14:15 – 16:00	Parents as Mediating Actors in Primary Computer Science Education: A Systematic Literature Review Whitney Hachenberg and Torsten Brinda
14:15 – 16:00	Media Literacy Education Using Card Games and Its Potential Atsushi Hikita and Yumiko Ogata
16:00 – 16:15	Coffee And Networking
16:15 – 17:15	Guidance for submission of papers for the post-conference proceedings book by the chief editor, Professor Don Passey
17:30 onwards	Welcome reception

DAY 2 - TUESDAY OCT 20

09:00 – 09:15	Daily Reflections & Announcements (Plenary Hall: Nari & Ndau)
09:15 – 10:15	Keynote Speaker (Plenary Hall: Nari & Ndau) Speaker: Prof. Jean Greyling Title: 'Invention, Collaboration, and Code: Developing Tangible Computing in South Africa'. Chair: Don Passey
10:15 – 10:30	Coffee & Networking Break
10:30 – 12:10	TRACK A: GENAI IN HIGHER EDUCATION (INGWE ROOM) Chair: Christophe Reffay
10:30 – 12:10	The Buck Stops Here: A Human-in-the-Loop Blueprint for Teaching AI-Augmented Research in South Africa Brenda Scholtz and Lynn Fletcher
10:30 – 12:10	The role of generative artificial intelligence in learning computer programming: students' perceptions and reflections Janet Liebenberg and Marietjie Havenga
10:30 – 12:10	An Ethnographic Study of a First-Year Information Systems Module in the Age of Generative AI Malcolm Garbutt and Carolien van den Berg
10:30 – 12:10	Walking the Scene: Embodied Forensic Investigation Through Augmented Reality in a Narrative-Driven Platform Jarred Orfao and Wai Sze Leung
10:30 – 12:10	When AI becomes a Teammate: Negotiating the Role of Generative AI in Student Teams Lizette Weilbach and Adriana A. Steyn
10:30 – 12:00	TRACK B: EDUCATIONAL MANAGEMENT, SUPERVISIONS & SCALING (MHELEMBE ROOM) Chair: Lizette Weilbach
10:30 – 12:00	An Investigation into 3rd Year and Honours Projects Supervision Management Practices in South Africa Andre Calitz and Margaret Cullen

10:30 – 12:00	The transitioning of third year Information Technology students to an honours programme and beyond Rudi Serfontein, Henri van Rensburg, J. Heystek Grobler, Lynette Drevin and Gunther Drevin
10:30 – 12:00	Scaling Laboratory-Based Teaching to Large Venues Without Computers: Efficiency and Impact on Student Performance Nita Mennega, Hanlie Smuts and Michael Bouwer
10:30 – 12:00	Deterministic Risk Scoring for Connected Early Intervention: An Equity-Driven, Multi-Domain Approach to First-Year Engineering Student Retention in South Africa Athenkosi Nzala, Unathi September and Malibongwe Manono
10:30 – 12:00	Doctoral Consortium (Room 3) Chaired by Javier Osorio and Wande Daramola
12:00 – 13:00	Doctoral Consortium (Rooms 2 and 3) Chaired by Javier Osorio and Wande Daramola
13:00 – 14:00	Lunch
14:00 – 15:00	Talk and Discussion-South African Perspectives Chair: Riana Steyn
14:00 – 15:00	Digital to AI Literacy and future capabilities, Curriculum, Assessment: South Africa focus INGWE ROOM.
14:30 – 15:00	INGWE ROOM Madelein Meiring McGraw-Hill <i>Talk and discussion</i>
14:00 – 15:00	Poster & Demo Session (Foyer)
14:00 – 15:00	Exploring Technostress in the Era of Generative Artificial Intelligence Vusumzi Funda
14:00 – 15:00	Integrating AI-powered Chatbots in Informal Digital Learning of English Pronunciation: A Participatory Study with Primary School Students Mengqi Fang
14:00 – 15:00	Teaching energy transition in Macaronesia with system dynamics and environmental learning computer simulation Javier Osorio
15:00 – 16:45	TRACK C: INFORMATION SYSTEMS & CYBERSECURITY EDUCATION (INGWE ROOM) Chair: Lynette Drevin
15:00 – 16:45	From Learner to Educator Student Experiences of Peer-Teaching in an Honours Computer Security Module Michael de Jager and Lynette Drevin
15:00 – 16:45	The Participation-Centered Learning Model (PCLM): A Conceptual Model for Undergraduate Information Security Education Michael de Jager
15:00 – 16:45	Reflections from Integrating Cybersecurity Awareness in a Higher Education Institution: A Case Study of a South African University Lynn Fitcher and Kerry-Lynn Thomson
15:00 – 16:45	Beyond Access. Learner Cyber-Safety Readiness for Connected Learning Godwin Mandinyanya, Wallace Chigona, Caroline Magunje and Laban Bagui
15:00 – 16:45	Cybersecurity Challenges and Maturity Considerations for Online and Hybrid Higher Education: A Scoping Review and Socio-Technical Mapping Nuraan Davids-Latief, Louis Fourie and José Frantz
15:00 – 16:45	TRACK D: ENGINEERING, VOCATIONAL & IMMERSIVE TECH (MHELEMBE ROOM) Chair: Christophe Reffay
15:00 – 16:45	The application of AI technologies as connected learning enablers in industrial engineering education Jacoba Bührmann and Maria van Zyl-Cillié
15:00 – 16:45	Making Thinking Visible in AI-Integrated Tertiary Vocational Education Bertram Haskins
15:00 – 16:45	A Prescriptive Framework for Designing Experiential Learning Interventions in Engineering Education in the Age of AI Tanya Kok, Maria van Zyl-Cillié and Jacoba Bührmann
15:00 – 16:45	Artificial Intelligence as a Facilitator of Vocational Science: A Conceptual Framework for Apprentice Learning

	Ann Baxter, Therese Keane and Stefan Schutt
15:00 – 16:45	A Comparison of the Use of GenAI Tools by Computer Science Students, Academics Teaching Programming Modules and IT Professionals in Industry Ines Oldenburg, Andre Calitz, Margaret Cullen and Jorge Marx Gomez
16:45 – 17:00	Coffee And Networking

DAY 3 - WEDNESDAY OCT 21

09:00 – 09:15	Daily Reflections & Announcements (Plenary Hall: Nari & Ndau)
09:15 – 10:15	TRACK A: DISTANCE LEARNING, PLATFORMS & FUTURE SKILLS (INGWE ROOM) Sharon Singh
09:15 – 10:15	Cognitive load, Immersive Technologies, and Inclusion: A synthesis and framework for Open Distance eLearning in Higher Education Charlotte Hlengwa
09:15 – 10:15	From Conceptual Model to Implementation: Evaluating Cross-Module Integration in Undergraduate Computing Education Luke Coetzee, Michael de Jager, and Lance Bunt
09:15 – 10:15	AI and Human Skills development: Scenario planning of the future of Education 2030 Nicholas Mavengere, Toshinori Saito, Francis Manzira, Moses Moyo, Marie Collins, Atsushi Hikita, Daryl Hepting, Maina Muuro and Amit Pariyar
09:15 – 11:00	TRACK B: INTELLIGENT SYSTEMS, ASSESSMENT & GRADING (MHELEMBE ROOM) Mary Webb
09:15 – 11:00	Automated Grading and Feedback System for Students' Essays Kristoffer Hagen, Isah Lawal and Shahnaila Rahim
09:15 – 11:00	Evaluation of a Configurable Processor for LLM-Resistant Embedded Systems Assessment Gerrit Buter, Melvin Ferreira and Ashraf Sheri
09:15 – 11:00	Comprehensibility over Transparency: How South African Students Evaluate Explanations from an Education Recommender System Ayanda Ndlovu, Unathi September and Walter Ferreira Uys
09:15 – 11:00	Evaluating the Quality of Assessment Items Generated by Large Language Models for Large-Scale Educational Assessments Adilson Cruz, Isaura Alcina Martins Nobre, Marize Lyra Silva Passos and Mariella Berger
09:15 – 11:00	Bounded Professional Agency and Generative AI: Teachers Navigating High-Stakes Assessment Cameron Stow, Therese Keane, Alexia Maddox and Craig Deed
10:30 – 11:15	Coffee And Networking Break
11:15 – 12:30	Morning Short Paper Presentations (MHELEMBE ROOM) Chair: Therese Keane
11:15 – 12:30	Chromebooks in Public Secondary Schools in India: A Case Study on Language Classroom Integration Amina Charania and Sumegh Paltiwale
11:15 – 12:30	Co-Constructing a Primary Data Literacy Framework: Lessons from Design-Based Research in the DALI4US Project Deirdre Butler, Janez Demšara, John Hurley, Claude Reuter, Ana Fariča, Aoife Flanagan, Anthony Kilcoyne, Borut Čampelj and Blaž Zupan
11:15 – 12:30	Designing Collaborative Introductory Informatics for Non-STEM Students in the Age of AI Takeshi Watanabe and Seiichi Tani
11:15 – 12:30	Building Teacher Self-Efficacy for Coding and Robotics Through Connected Professional Development: Evidence from a WhatsApp-Based Chatbot Intervention in South African Foundation Phase Education Embeth Holly Van der Wal, Ronel Callaghan and Jean Greyling
11:15 – 12:30	Teaching in the Feed: Authentic Digital Literacy Assessment in AI-Connected Learning Environments Maree Skillen
12:15 – 13:15	Workshop INGWE ROOM

12:15 – 13:15	From Tokens to Alignment: Exploring Large Language Models with TINA's Learning Journey Ralf Romeiki
12:15 – 13:15	Seminar/Panel MHELEMBE ROOM
12:15 – 13:15	Generative AI in Education: Towards Critical, Reflexive, and Ethical Pedagogical Practice Mary Webb, Sharon Singh and Deirdre Butler
13:15 – 14:15	Lunch
14:15 – 15:45	TRACK C: TEACHER TRAINING, CREATIVE MAKER TOOLS & ROBOTICS (INGWE ROOM) Chair: Machdel Matthee
14:15 – 15:45	Preparing Teachers for Teaching Advanced AI: Insights from a Professional Development Offer Franz Jetzinger, Sven Baumer and Tilman Michaeli
14:15 – 15:45	Students' and Teachers' Use of Generative AI in Computer Science Education in Schools - A Systematic Literature Review Dominikus Häckel and Torsten Brinda
14:15 – 15:45	Making the Connected World Tangible: Design Knowledge from a Smart-Home Robotics Lesson Series in Secondary Computing Education Jana Afreen Ahmed and Ralf Romeike
14:15 – 15:45	Moving from Cognitive Surrender back to Critical Thinking: Training GenAI Chatbots as Socratic Co-Facilitators Corné Olivier, Lizette Weilbach and Carina de Villiers
14:15 – 15:45	TRACK D: Computer science and computational thinking (MHELEMBE ROOM) Chair: Margaret Leahy
14:15 – 15:45	Narrativity in Computer Science Education: An Analysis of Bebras Tasks Michael Weigend
14:15 – 15:45	Students' Readiness for Nested Programming Constructs: A Qualitative Analysis Using the Computational Thinking Test (CTt) Jayanti Nayak, Therese Keane Tanya Linden and Milorad Cerovac
14:15 – 15:45	The Impact of Educational Robotics on Computational Thinking Skills among STEM Students: Benefits and Challenges of Implementation Chinedu Okonkwo and Amos Anele
14:15 – 15:45	From Theory to Practice: Assessing Soft Skills through Continuous Assessment Using the "What, So What, Now What" Reflection Framework Adriana A Steyn and Sollie Millard
15:45 – 16:15	Coffee And Networking
16:30	Depart for the Conference Bush Dinner

DAY 4 - THURSDAY OCT 22

09:00 – 09:30	Virtual Reflection & Key Takeaways of the 3 In-Person Days at the Conference (INGWE & Zoom A)
09:30 – 10:30	TRACK 1A: VIRTUAL SESSION 1A: PRIMARY/SECONDARY GENDER & TECH EDUCATION (INGWE ROOM & ZOOM A) Chair: Margaret Leahy
09:30 – 10:30	E-Learning for E-Gov in Post-Conflict Somalia via Learning Passport Mohamed Nuh and Mikko Ruohonen
09:30 – 10:30	Gender in AI Literacy Education: A Systematic Review on Girls, Artificial Intelligence Literacy, and Education in the Age of AI Cody Jackson, Therese Keane and Milorad Cerovac
09:30 – 10:30	Preparing Teachers in the Age of AI: a study with Portuguese trainees Ana Amélia Carvalho and Adelina Moura
09:30 – 10:00	TRACK 1B: VIRTUAL SESSION 1B: HIGHER EDUCATION PLATFORMS & LEARNING DATA (MHELEMBE ROOM & ZOOM B) Chair: Riana Steyn

09:30 – 10:00	Operationalizing Digital Competence in Higher Education: A Construct Validity Study Using Moodle Event Data Tsakani Justice Baloyi and Nazeer Joseph
09:30 – 10:00	Using Blackboard LMS with AI for Classroom Action Research Wesley Moonsamy, Hugo Lotriet and Hanlie Smuts
10:00 – 10:45	Coffee And Networking
10:45 – 11:30	TRACK 1C: VIRTUAL SHORT PAPER SESSION (Zoom A Chair: Milorad Cerovac)
10:45 – 11:30	From AI Item Generation to Trustworthy Public Assessment: A Human-in-the-Loop Framework for Low-Resource Contexts Louisa Muparuri
10:45 – 11:30	Exploring Student Narratives of Generative AI Use in Academic Writing: Tensions Between Academic Integrity, Agency, and Identity Uchita Bakshani
10:45 – 11:30	Using a Wiki to Connect and Engage Students Daryl Hepting, Swe Zin Ei and Julia Hu
10:45-11:30	Conceptualisation of Early Childhood Teachers’ AI Literacy in AI-Integrated Educational Practice Yuying Pei, Sarah Prestridge, Therese Keane and Susanne Garvis
10:30 – 12:30	DOCTORAL CONSORTIUM CHAIRED BY JAVIER OSORIO AND WANDE DARAMOLA (MHELEMBE ROOM & ZOOM B)
11:45-13:00	VIRTUAL ENGAGEMENT WITH CONFERENCE KEYNOTE SPEAKER, Chair: Amina Charania
11:45 – 12:30	Virtual Keynote Recording Viewing: Keynote highlights of Mrs. Joice Benza/ Prof. Jean Greyling Zoom A
12:30 – 13:00	Live Q&A and Discussion with the Keynote Speaker (Zoom A)
13:00 – 14:30	Virtual Afternoon Lunch/Coffee & Hybrid AGM Break (3.3 & 3.9) Zoom A and Zoom B
14:30 – 16:00	TRACK 2A: VIRTUAL SESSION 2A: COMPETENCY PATHWAYS, TEACHERS & PRACTICE SCALING (INGWE ROOM & ZOOM A) Chair: Torsten Brinda
14:30 – 16:00	Explicating AI Systems as Curricular Objects of Reference: Deriving the Computing Dimension of Teachers’ AI Competence Across Subjects Uwe Lorenz
14:30 – 16:00	Gender Differences in Adolescent Students' Interactions with Project-Based Learning with Technology Vinay Lautre, Amina Charania and Sandeep Wadhe
14:30 – 16:00	Competency-Aligned Learning Pathways for AI in Secondary Computer Science Education Stefan Pasterk, Corinna Möblacher and Andreas Bollin
14:30 – 16:00	Recommendations for Scaling, Modification and Sustainability of Video based or Similar Programmes in Government-Run Middle and Secondary Schools in India Amina Charania, Durba Sarkar, Jayanth Nadheri and Bushra Parveen
14:30 – 16:00	TRACK 2B: VIRTUAL SESSION 2B: ACADEMIC INTEGRITY, INFORMATION TRUST & ROLE SHIFTS (MHELEMBE ROOM & ZOOM B) Chair: Sharon Singh
14:30-16:00	A Consideration of Local Echo Chambers in Information Trust Evaluation: Through a Case Analysis of Literacy Education Sayaka Tohyama and Jun Ichikawa
14:30-16:00	Ensuring Academic Integrity in the Age of Voice Cloning: Evaluating Verbal Verification for Micro-credentials. Oyena Mahlasela and Adriana A Steyn
14:30-16:00	From Displacement to Evolution: Unbundling the Educator Role under AI-Enabled Learning Gabriel Hoffman and Adheesh Budree
14:30-16:00	Official Conference Closing Ceremony Programme co-chairs and team, Local chair and team, TC3 chairs
16:00:16:30	Coffee And Networking