



Programme

Day 1 Tuesday 11 July 2023		
10h00	Workshop 1: Writing for publication in EER	Facilitator: Bruce Kloot, SJEE, CREE, UCT
11h30	Break	
11h45	Workshop 2: ECSA professional registration for academics	Facilitator: Trevor Haas, Engineering Registration Consultants, SU
13h15	Lunch	
14h00	Room check-in	
14h30	Workshop 3: Socially responsible projects for engineering students	Facilitator: Robyn Clark, Education consultant with Engineers without Borders
16h00	Close	
17h00	Welcome Function with Silver sponsors Juta & PPS	
Day 2 Wednesday 12 July 2023		
08h30	Welcome address: Keith Jacobs, SASEE president	
08h40	SASEE Biennial General Meeting	
09h15	Opening address: Prof Ben van Wyk (DVC-T&L) & Prof Grace Kanakana-Katumba (Dean EBE), TUT Chair: Deborah "Debby" Blaine	
09h30	Keynote: Design has become too important to be left only to the designers	
	Richard Perez, UCT Hasso Plattner d-school Afrika Chair: Brandon Collier-Reed	
10h20	Book presentation: Engineering Ethics in Southern Africa - Lorraine Doherty, WITS	
10h30	Tea (Book signing at Juta stall)	
	Session 1A Student learning & success Chair: Karin Wolf	Session 1B Skills, attributes & competencies Chair: Caroline Khoathane
10h50	"Newton stays Newton!" Engineering Students' Perceptions of Decolonised Engineering Education Zach Simpson, J Meyer, and S von Solms	Engineering knowledge in practice: case studies in civil engineering Nicky Wolmarans
11h10	Learning to use the Grounded Theory method to explore student success in African contexts Helen Inglis, D Mogashana, and E Matemba	Critical awareness and counter narratives: exploring students' views about sustainability Corinne Shaw, and B Kloot
11h30	Using crib sheets to understand student approaches to learning Teresa Hattingh	Engineering Undergraduates' Conceptions of Learning to Think Critically Liezle Boshoff, Z Simpson, and B Collier-Reed
11h50	Automated flow detection in education: A methodology to measure flow from student feedback Leon Burger	Transformation of a practical module from a Social Constructivist Perspective to enhance graduate employability – an example Annegret Stark, and A Philipp
12h10	Short break	

	Session 2A Graduate Attributes Chair: Teresa Hattingh	Session 2B Student learning & success Chair: Eudes Tshitshonu
12h20	<i>Graduate Attributes: Reviewing Agency, Agility, Critical Thinking, Flexibility, Purpose, and Resilience in Engineering Education</i>	<i>Enabling Engineering Student Learning in Online and Blended Format in the African Context: A Scoping Literature Review</i>
	<u>Kapil Moothi</u>	<u>Anita Campbell</u> , A Gwynne-Evans, P Padayachee, K Kanjee, and R Smit
12h35	<i>Activities suitable for the development of graduate attributes among senior engineering students</i>	<i>An analysis of the literature on engineering student attrition in the South Africa higher education system</i>
	<u>Arthur James Swart</u>	<u>Brandon Collier-Reed</u> , K Nyembwe, T Maphumulo, A Dienga, and C Zvandasara
12h50	<i>ECSA Alignment of Graduate Attributes with Professional Competencies</i>	<i>Learning theories for improving teaching and learning value</i>
	<u>Nkosinathi Khoza</u> , and N Wolmarans	<u>Edward Kurwakumire</u>
13h05	<i>Designing an Activity that Supports the Development of Critical Thinking</i>	<i>Authentic assessment practices in applied thermodynamics can enhance well-being among chemical engineering students</i>
	<u>Liezie Boshoff</u>	<u>Kapil Moothi</u>
13h20	Lunch	
	Session 3A Employability Chair: Ferdie Gerber	Session 3B Online & virtual learning Chair: Disapele Mogashana
14h10	<i>Engineering soft skills development for employability</i>	<i>Engineering students' move to online learning during Covid-19 at a University of Technology: Enablements and constraints towards socio and academic inclusivity</i>
	<u>Khanyo Hlatshwayo</u> and JC Pretorius	N Mkonto, <u>Luvuyo Kakaza</u> , and E Esambe
14h30	<i>Collaborative teaching, training and learning for 3rd year students with SMMEs – A case study in Mechanical Engineering Technology</i>	<i>Online, hybrid and face-to-face teaching: Learning from engineering students' experiences during and post Covid</i>
	<u>Samuel Loviso Gaibani</u>	<u>Anita Campbell</u> , D Mogashana, and M Basitere
14h50	<i>Towards an Ubuntu pedagogy: building engineering employability skills</i>	<i>Understanding Student Perspectives of a Hybrid, Integrative Approach in a Theory-Rich Module</i>
	<u>Karin Wolff</u> , F Gerber, V Kumar, T Dalldorf et al.	<u>Melody Neaves</u> , D Blaine, and K Wolff
15h10	Tea	
15h30	Invited speaker: Integrated and connected Engineering Math	
	Dr Matheus Oliveira De Andrade, UCL Chair: Karin Wolff	
16h20	Short break	
	Session 4A Engineering & Industry Chair: Mangimalay "Maggie" Chetty	Session 4B Engineering education in practice Chair: Bruce Kloot
16h30	<i>The role of universities in preparing industry to mentor WIL students so that the outcomes are aligned with learner guide's expectations</i>	<i>Effects of machine learning and artificial intelligence in an academic environment</i>
	<u>Samuel Gaibani</u> , A Maile, S Xaba, Z Mkofo, and M Dlambulo	<u>Oluwaseye Samson Adedaja</u> , E Sadiku, and Y Hamam
16h45	<i>An analysis of the engineering skills pipeline</i>	<i>Teaching value chain of prior knowledge, theory and practice in higher education engineering studies and the industry</i>
	<u>Brandon Collier-Reed</u> , K Nyembwe, T Maphumulo, and A Dienga	<u>Witske Meyer</u> , and Karel Kapp
17h00	<i>The future impact of engineering education in South Africa</i>	<i>Exploring the implications of decolonization and cognitive justice for the future of engineering education practice</i>
	<u>Patience Nondumiso Mofokeng</u> , and L O Babalola	<u>Kapil Moothi</u>
17h15	<i>Entrepreneurial Mindset for Future Engineers Through Innovative and Sustainable Research</i>	<i>Automating the Accreditation Preparation Process: Application of Machine Learning</i>
	<u>Idowu David Ibrahim</u>	<u>Randhir Rawatla</u>
17h30	Close	
18h30	Gala Dinner with Gold sponsors Opti-Num Solutions & Qfinsoft with ANSYS	

Day 3 Thursday 13 July 2023

	Session 5A Student experience Chair: Annegret "Ann" Stark	Session 5B First year experience Chair: Anita Campbell
08h30	Lessons learned from implementing a mentorship programme P Siima, A Maile, Samuel Gajibani, and H Steenkamp	"You don't know anything until you know everything" - Threshold concepts in first year student narratives about engineering Helen Inglis, and Z Simpson
08h50	Classification of key criteria in the development of computational thinking skills in engineering students Suvendi Rimer, and K Ouahada	First Year Engineering Drawings Summer School – Back to Basics Case Study Kristiaan Schreve, and K Wolff
09h10	Me as an Engineer: career aspirations and expectations of South African first-generation engineering students F Harris, Bruce Kloof, and R Smit	Closing the Knowledge Gap from Conceptual to Practical Computer Programming Knowledge and Skills: An Activity System of a First Year Programming Course Wiseman Nyembe, N Wolmarans, and K Wolff
09h30	Bachelor of Engineering Technology and Diploma students' perceptions of success influences and potential retention Ann Lourens, and C Mapaling	Investigating first-year engineering students' development of digital agency in a digitally mediated learning environment L Ganduri, Corinne Shaw, and B Collier-Reed
09h50	Tea	
	Session 6A Assessment Chair: Ann Lourens	Develop your extended abstract into a full paper SASEE workshop
10h10	Transfer of knowledge and skills from junior to senior years: Getting the fundamentals right Whisper Maisiri, and W Van Niekerk	Facilitators: Teresa Hattingh (REEN, UJ), Karin Wolff (SASEE, SU), Deborah Blaine (SASEE, SU), Helen Inglis (REEN, UP)
10h30	Grading Variability in Software Design Assessments: Human versus Artificial Intelligence Antonie Smith, C Pietersen, L Van Wyk, and B J Van Wyk	
10h50	Development of higher-level thinking skills by automatically generating examination problems and their solutions Warren du Plessis	
11h10	Application of the Project/Problem Based Learning in Engineering Education Process Zhongjie Huan	
11h30	Short break	
11h40	Computational thinking workshop with Opti-Num Solutions Facilitator: Jon Esteves	
13h10	Lunch	
14h00	Keynote: A 360 degree look at your critical skills that give you energy, sustainability and the edge in your work Sue Fuller-Good, Energy Incubator Chair: Deborah "Debby" Blaine	
15h30	Tea	
15h50	Panel Discussion: ECSA IDoWE for Academics Facilitator: Prof Brandon Collier-Reed (SASEE) Panelists: Dr Franciska Bothma (ECSA) Ms Nivashnee Naidoo (ECSA), Dr Lelanie Smith (UP/IEC), Dr Keith Jacobs (SASEE/ECSA), Prof Grace Kanakana-Katumba (ECSA Deans' Forum, Dean TUT)	
16h50	Close	