



PROGRAMME

TUESDAY 11 July 2023

10h00	Workshop 1 Writing for publication in engineering education research Prof Bruce Kloot <i>Editor: Southern Journal of Engineering Education, CREE, UCT</i>	Royal Clansmann
11h30	Refreshment break	
11h45	Workshop 2 ECSA professional registration for academics Prof Trevor Haas <i>Engineering Registration Consultants, SU</i>	Royal Clansmann
13h15	Lunch	
14h00	Room check-in	
14h30	Workshop 3 Advocating for change in Engineering Education: Reflections from EWB's Engineering for People Design Challenge Robyn Clark <i>Educational consultant with Engineers without Borders</i>	Royal Clansmann
16h00	Close	
17h00	Welcome cocktail function With Silver sponsors: Juta & PPS	GlenPalms

WEDNESDAY 12 July 2023

08h30	Welcome Dr Keith Jacobs <i>President, SASEE</i>	Royal Clansmann
08h40	SASEE BGM and Elections	Royal Clansmann
09h15	Opening address Prof Ben van Wyk (DVC-T&L) & Prof Grace Kanakana-Katumba (Dean EBE), TUT <i>Chair: Deborah "Debby" Blaine</i>	
09h30	Keynote speaker Design has become too important to be left only to the designers Richard Perez <i>UCT Hasso Plattner d-school Afrika</i> <i>Chair: Brandon Collier-Reed</i>	Royal Clansmann
10h20	Book presentation with Juta Engineering Education in South Africa with author Lorraine Doherty	Royal Clansmann
10h30	Refreshment break with book signing at Juta desk	
	Session 1A Student learning & success Chair: Karin Wolff	Session 1B Skills, attributes & competencies Chair: Caroline Khoathane
10h50	<i>"Newton stays Newton!": Engineering students' perceptions of decolonised engineering education</i> Zach Simpson, J Meyer and S von Solms	<i>Engineering knowledge in practice: Two studies in civil engineering</i> Nicky Wolmarans
11h10	<i>Learning to use the Grounded Theory method to explore student success in African contexts</i> H Inglis, Disaapele Mogashana and E Matemba	<i>Critical awareness and counter narratives: Exploring students' views about sustainability</i> Corinne Shaw and B Kloot
11h30	<i>Using crib sheets to understand student approaches to learning in an engineering context</i> Teresa Hattingh	<i>Engineering Undergraduates' Conceptions of Learning to Think Critically</i> Liezle Boshoff, Z Simpson, and B Collier-Reed
11h50	<i>Automated flow detection in education: A methodology to measure flow from student feedback</i> Leon Burger	<i>Transformation of a practical module from a social constructivist perspective to enhance graduate employability: An example</i> Annegret Stark and A Philipp
12h10	Break	

	Session 2A Graduate Attributes Chair: Teresa Hattingh	Royal Clansmann	Session 2B Student learning & success Chair: Eudes Tshitshonu	Greenwells
12h20	Graduate attributes: Reviewing agency, agility, critical thinking, flexibility, purpose, and resilience in engineering education <u>Kapil Moothi</u>		Enabling engineering student learning in online and blended format in the African context: A scoping literature review <u>Anita Campbell</u> , A Gwynne-Evans, P Padayachee, et al.	
12h35	Activities suitable for the development of graduate attributes among senior engineering students <u>Arthur James Swart</u>		An analysis of the literature on engineering student attrition in the South Africa higher education system <u>Brandon Collier-Reed</u> , K D Nyembwe, T P Maphumulo, et al.	
12h50	ECSA Alignment of Graduate Attributes with Professional Competencies <u>Nkosinathi Khoza</u> , and N Wolmarans		Learning theories for improving teaching and learning <u>Edward Kurwakumire</u>	
13h05	Designing an activity that supports the development of critical thinking <u>Lieze Boshoff</u>		Authentic assessment practices in applied thermodynamics can enhance well-being among chemical engineering students <u>Kapil Moothi</u>	
13h20	Lunch			
	Session 3A Employability Chair: Ferdie Gerber	Royal Clansman	Session 3B Online & virtual learning Chair: Disaapele Mogashana	Greenwells
14h00	The engineering management framework for soft skills development <u>Khanyo Hlatshwayo</u> , A Malan and J C Pretorius		Engineering students' move to online learning during Covid-19 at a University of Technology N Mkonto, <u>Luvuyo Kakaza</u> , and E Esambe	
14h20	Towards an ubuntu pedagogy: Building engineering employability skills <u>Karin Wolff</u> , A Basson, C Basson, et al.		Online, hybrid and face-to-face teaching: Learning from engineering students' experiences during and post Covid <u>Anita Campbell</u> , D Mogashana, and M Basitere	
14h40	Qfinsoft with Ansys Presentation Using Ansys to support engineering education <u>Cedric Bellanger</u>		Understanding Student Perspectives of a Hybrid, Integrative Approach in a Theory-Rich Module <u>Melody Neaves</u> , D Blaine, and K Wolff	
15h10	Refreshment break			

15h30	Invited speaker		Royal Clansmann
	Integrated and Connected Engineering Math Dr Matheus Oliveira De Andrade University College London, UK Chair: Karin Wolff		
16h15	Break		
	Juta Prizegiving		
	Session 4A Engineering & Industry Chair: Mangimalay "Maggie" Chetty Royal Clansman	Session 4B Engineering education in practice Chair: Bruce Kloot Greenwells	
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> <u>Samuel Gqibani, A Maile, S Xaba, et al.</u>	<i>Effects of machine learning and artificial intelligence in an academic environment</i> <u>Oluwaseye Samson Adedaja, E Sadiku, and Y Hamam</u>	
16h45	<i>The engineering skills pipeline</i> <u>Brandon Collier-Reed, K D Nyembwe, T P Maphumulo, and A Dienga</u>	<i>Teaching value chain of prior knowledge, theory and practice in higher education engineering studies and the industry</i> <u>Witske Meyer, and K Kapp</u>	
17h00	<i>The future impact of engineering education in South Africa</i> <u>Patience Nondumiso Mofokeng, and L O Babalola</u>	<i>Exploring the implications of decolonization and cognitive justice for the future of engineering education practice</i> <u>Kapil Moothi</u>	
17h15	<i>Entrepreneurial mindset for future engineers through innovative and sustainable research: A review</i> <u>Idowu David Ibrahim, E.R Sadiku, Y Hamam, et al.</u>	<i>Automating the Accreditation Preparation Process: Application of Machine Learning</i> <u>Randhir Rawatlal</u>	
17h30	Close		
18h30	Conference Gala Dinner		Glencove
	With Gold Sponsors Opti-Num Solutions and Qfinsoft/Ansys		

THURSDAY 13 July 2023

	Session 5A Student experience Chair: Annegret "Ann" Stark <small>Royal Clansmann</small>	Session 5B First year experience Chair: Anita Campbell <small>Greenwells</small>
08h30	<i>Lessons learned from implementing a mentorship programme</i> P Siima, A Maile, <u>Samuel Gqibani</u> , and H Steenkamp	<i>"You don't know anything until you know everything": Threshold concepts in first year student narratives about engineering</i> <u>Helen Inglis</u> , and Z Simpson
08h50	<i>Classification of key criteria in the development of computational thinking skills in engineering students</i> <u>Suvendi Rimer</u> , and K Ouahada	<i>First year engineering drawings summer school: Back to basics case study</i> <u>Kristiaan Schreve</u> , and K Wolff
09h10	<i>Me as an engineer: Career aspirations and expectations of South African first-generation engineering students</i> F Harris, <u>Bruce Kloot</u> , and R Smit	<i>Closing the knowledge gap from conceptual to practical computer programming knowledge and skills: Activity systems of introductory computer programming courses</i> <u>Wiseman Nyembe</u> , N Wolmarans, and K Wolff
09h30	<i>Bachelor of Engineering Technology and Diploma students' perceptions of success influences and potential retention</i> <u>Ann Lourens</u> , and C Mapaling	<i>Investigating first-year engineering students' development of digital agency in a digitally mediated learning environment</i> L Ganduri, <u>Corinne Shaw</u> , and B Collier-Reed
09h50	Refreshment break	
	Session 6A Assessment Chair: Ann Lourens <small>Royal Clansmann</small>	SASEE workshop Develop your extended abstract into a full paper <small>Greenwells</small>
10h10	<i>Transfer of knowledge and skills from junior to senior years: Getting the fundamentals right</i> <u>Whisper Maisiri</u> , and W Van Niekerk	Facilitators: Deborah Blaine, SASEE, SU Teresa Hattingh, REEN, UJ Helen Inglis, REEN, UP Karin Wolff, SASEE, SU
10h30	<i>Grading variability in software design assessments: Human versus artificial intelligence</i> <u>Antonie Smith</u> , C Pietersen, L Van Wyk, and B J Van Wyk	
10h50	<i>An Alternative Approach to Automatic Question Generation and its Impact on Education and Evaluation</i> <u>Warren du Plessis</u>	
11h10	<i>Application of the project/problem-based learning in engineering education process</i> <u>Zhongjie Huan</u>	
11h30	Break	
11h40	Workshop with Opti-Num Solutions: Computational Thinking Instruction and Learning in Southern Africa Royal Clansmann Facilitator: Jon Esteves Opti-Num Solutions	

13h10	Lunch	
14h00	Keynote speaker	Royal Clansmann
	A 360 degree look at your critical skills that give you energy, sustainability and the edge in your work Sue Fuller-Good <i>Energy Incubator</i> Chair: Deborah "Debby" Blaine	
15h30	Refreshment break	
15h50	Panel Discussion: ECSA Identification of Work for Engineers – Implications for Academia	Royal Clansmann
	Facilitator: Prof Brandon Collier-Reed, <i>SASEE, UCT</i> 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	