



ISEM

INTERNATIONAL CONFERENCE ON
INDUSTRIAL ENGINEERING,
SYSTEMS ENGINEERING AND
ENGINEERING MANAGEMENT

2-4 OCTOBER | LORD CHARLES HOTEL | WESTERN CAPE , SOUTH AFRICA

Willingness to be puzzled is a valuable trait to cultivate, from childhood to advanced inquiry

-Noam Chomsky

JOIN US AT ISEM2023 INTERNATIONAL CONFERENCE | OCTOBER 2023.

When considering a puzzle, the first comforting truth that may occur is that puzzles do have solutions.



As we move from a new normal to the ever perplexing next normal, all the pieces of life's puzzle are scattered like a kaleidoscope of colours. As curious thinkers, seeking out intrigue and solutions to our challenges we also recognize another truth as put by Noam Chomsky: "The willingness to be puzzled is a valuable trait to cultivate, from childhood to advanced inquiry".

With a Venn diagram of overlapping puzzle pieces, the **Southern African Institute for Industrial Engineering (SAIIE)**, the **International Council on System Engineering (INCOSE)** and the **Graduate School of Technology Management (GSTM) at the University of Pretoria** are thrilled to invite you to the combined **ISEM2023** conference to cultivate your willingness to be puzzled!



Take up the piece in front of you, and then the next! Find the pattern, connect it, and come share with your fellow puzzlers! Soon, and perhaps surprisingly so, you will find that you become the piece that someone needs. Take up your place, *be the piece*, fill the empty spaces and be part of the solution to the bigger picture!



Lord Charles Hotel

Western Cape, South Africa

Join us for our CPD validated International Conference on Industrial Engineering, Systems Engineering and Engineering Management. This conference will offer memorable content, engagement and activities

CONFERENCE PROGRAM

More than 175 papers are currently being reviewed for the conference proceedings in which our authors are showcasing how the soft and hard skills of industrial engineering, systems engineering and engineering management can be used to solve some of our country's toughest challenges. Panel discussions, networking sessions, a cocktail function and a gala dinner will ensure that the full days are well rounded off.

Read further below about the ISEM2023 keynote speakers, workshops and registration fees.

CLICK HERE to register for the conference

ACCOMMODATION

A special rate of R2400 pp per night (B&B) was negotiated with the Lord Charles Hotel. Please ensure to book and pay with the hotel not later than 31 July 2023. Limited number of special rate rooms available.

Contact reservations@lordcharleshotel.com or **021 879 7000**.

Ensure to use **ISEM2023** as reservation code.

For more information on the Lord Charles Hotel

CLICK HERE



FOR ACCOMMODATION CLOSE TO THE LORD CHARLES HOTEL VISIT:

- <https://www.booking.com/>
- [tripadvisor.co.za](https://www.tripadvisor.co.za)
- [airbnb.co.za](https://www.airbnb.co.za)
- [lekkerslaap.co.za](https://www.lekkerslaap.co.za)

TOURIST ATTRACTIONS

CLICK HERE for Cape Town Top Tours & Activities

NEED TO APPLY FOR A VISA TO VISIT SOUTH AFRICA:

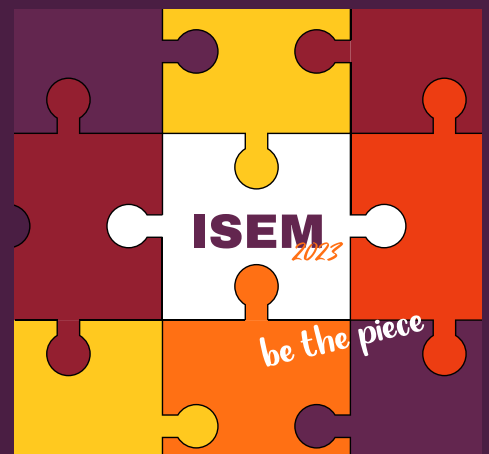
CLICK HERE for more information.

IMPORTANT SUBMISSION DATES

Final camera-ready papers	21 August 2023
Abstracts for presentation only track*	14 August 2023

**Abstracts should be no more than 150 words*

Abstracts for presentation only track can be submitted on forms: **CLICK HERE**



SPEAKERS

IAN MOLL RESEARCH FELLOW AT UNIVERSITY OF WITWATERSRAND

Ian will be presenting a Keynote address titled: **AI and the '4IR' - Industrial revolution, technological revolution or revolutionary technologies?**

Ian Moll is a research fellow at the Centre for Researching Education and Labour (REAL) at the University of the Witwatersrand, Johannesburg, South Africa. He was retired from the Division of Educational and Engineering Information Technology at the university at the end of 2021. His interests lie in theoretical psychology; knowledge, work and skill; the networked society; learning and pedagogy; and educational technology.

His PhD is in cognitive science from the University of Geneva, Geneva, Switzerland. During his career, he has been an early childhood educationist, an adult literacy teacher, a trade unionist, a researcher at the South African Institute for Distance Education, visiting professor at the Universities of Makerere and Witwatersrand (where he was a lead researcher in the Pan-African Agenda on the Pedagogic Integration), and a lecturer in educational theory and research, psychology of education and instructional design.

Keynote



Keynote



EDWIN (EDDIE) ANDREWS DEPUTY MAYOR AT CITY OF CAPE TOWN

Edwin Andrews, fondly known as Eddie was born and raised in Mitchell's Plain. He has been married for 23 years and has three children. Eddie and his family enjoy spending time together at home, going to church and supporting each other at various activities. He holds a Bachelors of Administration (majoring in Politics) from the University of Western Cape. He is currently completing his Honours.

Eddie attended Steenberg High School and was involved in various sports. Toward the end of his high schooling, he found a love for rugby. His parents could not afford tertiary education at that time and he was forced to work however, he kept playing rugby. He excelled and further went onto play for Western Province and the Springboks.

JANET SAWARI ENTREPRENEUR/INNOVATION STRATEGIST/RESEARCHER AT TAIR LABS

Janet is the CEO and founder of TAIR Labs ; an AI Research and Innovation Lab based in Cape town. She is a serial entrepreneur a recent Harambean for the 2023 class, she sits on the Women in ICT board, is an Inspiring 50 2022 honoree, and the AI contributor for The Yuan AI tech platform. Janet is the visionary behind an AI-assisted labelling, model training & collaborative tool that enables anyone to build an AI with no code. This is TAIR Labs latest product called X-VSN, pronounced 'X-Vision'.

Her vision is to enable businesses across industries to succeed quickly and efficiently with the power of computer vision. Her venture plans to explore innovations for healthcare, security and disrupt the industrial sector. She advocates for STEM education access, pan-African innovation, and leveraging AI to develop a new wave of industrialization on the African Continent. Her ambitions for social impact and gender inclusivity and diversity for youth in tech are evident through her efforts to produce a technical documentary about AI in Africa. With an MBA in Innovation Management and Entrepreneurship from Shanghai Jiaotong, a masters from the university of liverpool and a bachelors from Zhejiang university of science and technology Janet's appetite for driving innovation is unwavering and her vision for the continent clear.

Keynote





TARYN BOND-BARNARD
ASSOCIATE PROFESSOR AT ENGINEERING MANAGEMENT
PROGRAM AT STELLENBOSCH UNIVERSITY

Taryn together with Callie Pistorius will be presenting a Workshop titled: **Shaping the future: How to benefit from an engineering management career advantage.**

Taryn Bond-Barnard is an Associate Professor in the Dept of IE at the University of Stellenbosch. She is a former senior lecturer at the Graduate School of Technology Management at the University of Pretoria and has extensive experience as operations and project manager in the information and communications technology (ICT) industry. She holds a BEng (cum laude) degree in Industrial

Engineering, MEng (cum laude) and PhD degrees in project management all from the University of Pretoria. She has received several awards, most notably the 2018 International Project Management Association (IPMA) Global Young Researcher Award, recognition as one of the Mail and Guardian's Top 200 Young South Africans in 2019 and a departmental teaching award from the University of Pretoria. Taryn is a PRINCE2 practitioner, professional engineer with the Engineering Council of South Africa (ECSA), a Project Management Professional (PMP) with the Project Management Institute and a long-standing member of the International Project Management Association (IPMA) Research Group.

CALLIE PISTORIUS
PROFESSOR EXTRA-ORDINARY
AT UNIVERSITY OF STELLENBOSCH

Callie together with Taryn Bond-Barnard will be presenting a Workshop titled: **Shaping the future: How to benefit from an engineering management career advantage.**

Callie Pistorius is an extraordinary professor of Engineering Management in the Department of Industrial Engineering at the University of Stellenbosch. He is also the Director of DeltaHedron Ltd, a UK-based consultancy specialising in the management of innovation and technology intelligence to assess the strategic business impact, risks, opportunities and threats presented by the dynamics of technological change and emerging technologies.

He is a former Vice-Chancellor and Principal of the University of Pretoria in South Africa, where he was also the Director of the Institute for Technological Innovation and Dean of the Faculty of Engineering, Built Environment and IT, a former Chairman of the National Advisory Council on Innovation (NACI), as well as a former Vice-Chancellor of the University of Hull in the UK.



HANDRÉ DREYER
SOLUTIONS SPECIALIST AT 4SIGHT ASSET SIMULATION

Handré will be presenting a workshop titled: **The Simulation Game.**

Handré is a senior solutions manager with years of management and consulting experience in digital transformation, process simulation, digital twins, interoperability, and industrial engineering applications, in the healthcare, mining, manufacturing, logistics, telecommunications, information technology, and finance industries.

Handré has been involved with and managed projects across the globe including Africa, South America, USA, Canada, Australia, Russia and India.

WORKSHOP

WORKSHOP

NALINI SOOKNANAN PILLAY CORPORATE SPECIALIST- SYSTEM DYNAMICS AT ESKOM SOC

Nalini together with Rudolph Oosthuizen will be presenting a Workshop titled: **Applied System Dynamics Methodology.**

Nalini Sooknanan Pillay graduated with an engineering degree at the University of Witwatersrand (South Africa) in 1994. She then worked as a production engineer in the steelmaking industry, where she dealt with line expansion and optimisation projects.



In 1997, she joined Eskom's Research business unit where she was involved in generation plant related research, as well as the development of knowledge-management diagnostic programs. At the end of 2011, she set up the Eskom System Dynamics Centre, while completing her Masters in Sustainable Energy Engineering at UCT, and thereafter her PhD in Industrial Engineering with contributions to the field of systems engineering, at Stellenbosch University. She currently holds the executive role of Eskom Corporate Specialist in System Dynamics.



SUJA JOSEPH-MALHERBE SENIOR SYSTEMS ENGINEER | DIRECTOR OF LETTER27

Suja together with Rudolph Oosthuizen will be presenting a Workshop titled: **Unleashing the power of systemic thinking in problem framing.**

Suja has a passion for leadership and systems engineering, and as such, she is quite active in INCOSE in various roles. She served as the President of INCOSE South Africa from January 2017 to December 2018. She is a member of the inaugural cohort of the INCOSE Technical Leadership Institute and joined the Institute as a coach in 2020. She is an INCOSE Certified Systems Engineering Professional (CSEP) and a Solution-focused Brief Coach (ICF-ACSTHs training). She provides training and consulting services in systems engineering and leadership development to individuals and organisations through Letter27. She is also a sessional lecturer at the Faculty of Engineering and the Built Environment at the University of the Witwatersrand delivering post-graduate courses on systems engineering.

RUDOLPH OOSTHUIZEN SENIOR LECTURER AT GSTM AT UNIVERSITY OF PRETORIA

Rudolph together with Nalini Sooknanan Pillay will be presenting a Workshop titled: **Applied System Dynamics Methodology.**

Rudolph will also together with Suja Joseph-Malherbe present a Workshop titled: **Unleashing the power of systemic thinking in problem framing.**



Rudolph Oosthuizen joined SA Air Force in 1990 to obtain a B.Eng (Elec 1994), B.Eng (Hons) (Indus 1998) and MEM (2002) from UP. In the SA Air Force performed systems engineering roles in Electronic Warfare and Command and Control. In 2008 he joined Defence Peace Safety and Security (DPSS) at the CSIR. Rudolph is currently a Senior System Engineer supporting various Command and Control related projects with more than 15 years' experience in conceptual system modelling.



JAMES BEKKER
**LECTURER AT DEPARTMENT OF INDUSTRIAL ENGINEERING,
STELLENBOSCH UNIVERSITY**

James will be presenting a Workshop titled: **Introduction to multi-objective , stochastic simulation-optimisation.**

James Bekker is interested in computer simulation of discrete-event, stochastic systems. His research focuses on the theory and practice of improving systems using the integration of metaheuristics and simulation-optimisation with two or more objectives.

HUGO PIENAAR
BUSINESS PROCESS ENGINEER/DATA SCIENTIST AT PRAELEXIS

Hugo Pienaar will be presenting a Workshop titled: **Workflow Mapping Ecosystems.**

Hugo is an Industrial/Electrical Engineer with extensive experience in Machine Learning, Business Intelligence, SDLC and control systems.



TREVOR SHIHUNDLA
LECTURER AT TSHWANE UNIVERSITY OF TECHNOLOGY, PRETORIA

Trevor will be presenting a Workshop titled: **Plan A Business Simulation Game.**

Trevor is currently employed at Tshwane University of Technology as a Lecturer and Project Manager. A well experienced Industrial Engineer with 8+- year history of Teaching, Research, Business Process Improvement and Operational research in Pharmaceutical, Automotive, Consulting, Rail and Academia. Successfully managed contractual vehicles on Endurance on VWSA project in the capacity of Operations Engineer.



Currently managing a successful Business Simulation Game for the University of Technology. International project with engineers from three different countries: Single use Plastics Reclaim and Repurpose Container. Developed a framework for remote monitoring railcar (train) brakes using sensors. A registered assessor, facilitator and moderator for skills transfer under the SAQA unit standards ID#115753, 117871 AND 115759. Participation in research and innovation projects within a TUT focus area/niche area includes Incubation Project for the RMCERI Incubation Centre, merSETA Chair for Intelligent Manufacturing team member, Sponsorship Co-ordinator for the 30th CIRP design conference, Holistic and business game as scenario analysis for new venture creation and representing South Africa at The 7th young BRICS Forum under the category of Artificial Intelligence. Trevor earned a Masters degree in Industrial Engineering, where he was Gibela Research Chair Scholar and Bachelors in Industrial Engineering at the Tshwane University of Technology. Currently pursuing a PhD in Industrial Engineering.

WORKSHOP

REGISTRATIONS

Conference Registration Fees
(Accommodation is not included
in this fee):

Presenters

PRESENTERS

* If registered and paid between now and
15 Sept 2023

2 papers - R7 975

3 papers - R9 825

4 papers - R11 725

5 papers - R13 575

Other

★★ Standard Registration - SAIIIE Student Members - **R4 800**
(If registered and paid between now and 31 Aug 2023)

Daily registration fee - **R4 000**
(If registered and paid now until 31 Aug 2023)

★ Standard Group – Register 5 plus 1 free - **R44 000**
(if registered and paid between 1 June and 15 Sept 2023)

Conference Gala Dinner – 4 October 2023 - **R630**

* Group Discount: Register 5 delegates (excluding SAIIIE Student Member registration) and get the 6th delegate free.

** Student fee only applies to approved SAIIIE Student Members.
Visit www.saiie.co.za and apply for SAIIIE Student Membership.

Member Rates

conference fees (15% vat incl)

Standard Registration - R8 800

If registered and paid between 1 June and 31 Aug 2023

Late Registration - R9 900

If registered and paid between 1 Sept and 15 Sept 2023

Non-Member Rates

conference fees (15% vat incl)

Standard Registration - R9 900

If registered and paid between 1 June and 31 Aug 2023

Late Registration - R11 000

If registered and paid between 1 Sept and 15 Sept 2023

register here

**DELEGATES ARE
RESPONSIBLE TO BOOK
AND PAY FOR THEIR OWN
ACCOMMODATION**



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