

ENGINEERING SYMPOSIUM

Engineering for Sustainable Development: Empowering Innovation, Inclusion, and Impact

THE GALLERIA, SANDTON
25-26 March 2026

PROGRAMME

DAY 1: 25 MARCH 2026

CPD POINTS: 2 ECSA CREDITS

07h00 – 08h55 Registration

09h00 – 10h20 SESSION 1: OPENING CEREMONY

- Programme Director – **Mr Luphumlo Ngcayisa**
- Singing of the National Anthem - All
- Welcome Address – **Cllr Dada Morero**: Executive Mayor for City of Johannesburg
- Purpose of the Symposium – **Mr TC Madikane, Pr Eng**: President of the ECSA 7th Term Governing Council
- Significance of Partnership between ECSA and SAICE – **Professor Chris Roth, Pr Eng**: 2026 SAICE President
- Message of Support – **Dr Tsamba**, President of the Southern African Federation of Engineering Organisation
- Introduction of the Deputy Minister – **Ms Snowy Makhudu** CBE Council Member
- Keynote Address – **Mr Sihle Zikalala**: Deputy Minister for the Department of Public Works and Infrastructure

10:20 – 11:20

Panel Discussion: The Role of Voluntary Associations in Enhancing the Professional Positioning of Engineering Practitioners. **Moderator:** **Mr Luphumlo Ngcayisa**

Ms Sekadi Phayane-Shakhane: CEO – The South African Institution of Civil Engineering (SAICE)
Mr Chris Campbell: CEO – Consulting Engineers South Africa (CESA)
Mr Leanetse Matutoane: CEO – South African Institute of Electrical Engineers (SAIEE)
Mr Marshall Muthen: CEO – South African Road Federation (SARF)
Mr Uncel Mhelembe: CEO – South African Institution of Mechanical Engineering (SAIMECHE)

11:20 – 11:40

Mid-morning Tea and Exhibition Showcase

11:40 – 13:00

PLENARY ROOM: PARALLEL PANEL DISCUSSION

Reframing Engineering Education for Resilience, Relevance and Sustainability.

Moderator: **Mr Friedrich Slabbert, Pr Eng** – Director: Sciendum

Innovative Engineering Curricula: Building Future Skills for a Changing World

Dr Teresa Hattingh, Pr Eng – Senior Manager: Engineering Council of South Africa

A Flexible Design Thinking Framework for Industry Collaboration in Chemical Engineering Education

Dr Innocentia Mkhize – Deputy Head: Durban University of Technology

Make Today Matter – Deans' Perspectives in Disruptive Educational Times

Prof Wynand Steyn – Dean: EBIT

Engineering Futures Framework: A Roadmap for Inclusive, Sustainable Engineering Education

Mr Mvuyo Tyobeka – CEO: Southern Power Maintenance

The Art and Practice of Engineering in an Entangled World

Mr Mark Acton: Mobinomics

11:40 – 13:00

INNOVATION ROOM: PARALLEL PANEL DISCUSSION

Reframing Engineering Practice through Digital Innovation and Sustainable Infrastructure.

Moderator: Jason Grieve – Design Technology Specialist (Civil): Modena AEC

A Digital Platform for Small-scale Embedded Generation: Balancing Customer Service with Grid Integrity
Ismail Jefferies – Head of Service Connection Planning: City of Cape Town

Eskom's NTCSA Digital Substation Journey

Mr Zuko Mzekandaba – Chief Engineer: Eskom National Transmission Company South Africa

Empowering Young Engineers through AI and Natural Language Interaction

SP van Zyl: Professional Civil Engineer - GLS Infrastructure Planning

Empowering the Engineering Workforce through Digital Water Network Twins: A case Study from George Municipality

Tahseen Raiman: Professional Civil Engineer, Infrastructure Services Agency

Infrastructure as an Opportunity Enabler – Engineering Innovations for Resilient Livelihoods and Poverty Reduction

Mabo Makhubu: Section Manager, Management Services, Integrated Solutions - SMEC

Lutfiyya Mustapha: Graduate Technologist, Management Services, Integrated Solutions - SMEC

Application of GIS in Survey Data Point Generation for Civil Engineering: Vredebos, Boksburg Case Study

Bruno Tayo: All Projects Consulting Services - University of Johannesburg

Exploring Human-Centric Public Transport Design Principles in Gauteng MEng (Civil) Study

Rain Carstens: Candidate Engineer - SANRAL

IMPACT ROOM: PARALLEL PANEL DISCUSSION

Reframing Engineering Skills Pathways for Work-Integrated Learning and Inclusive Talent Development.

Moderator: Warrick Harvey - Account Manager (Construction): Modena AEC

Bosch Women in Engineering Bursary

Balan Govender – Managing Director: Bosch Ulwazi

Engineering Skills Incubator – EIT Programme

Balan Govender: Managing Director - Bosch Ulwazi

Future Skills in Engineering Education: Work-Integrated Learning and Project-based Learning (SDG 4)

Elelwani Beauty Ndou: Senior Technologist - NTCSA

Assessing Graduate Attributes in Work-Integrated Learning for Mechanical Engineering Students

Prof John Zvidzayi – Senior Lecturer: Mangosuthu University of Technology

INCLUSION ROOM: PARALLEL PRESENTATION SESSION

Women in Engineering Programme

“Lean In Lead Forward – Cultivating the Next Generation of Women Leaders in Engineering”

Ms Tshidi Mndzebele (CEO at Avenir Holdings)

Inclusivity and the Demand for Future-Fit Skills in the Engineering Sector

Ms Anjani Harejeven (CEO, WomHub & WomEng)

13h00 – 14h00

Lunch and Exhibition Showcase

14h00 – 15h30

INCLUSION ROOM: PARALLEL PRESENTATION SESSION

Women in Engineering Programme

Resilience and Technical Mastery: Lessons for Women Building Enduring Careers in Engineering.

Dr Allyson Lawless: (SAICE 2000 President and Founding MD at SAICE Professional Development and Projects (SAICE-PDP))

Recap & Closing Remarks

Ms Nthabeleng Lentsoane (SAICE)

14h00 – 15h30 | **PLENARY SESSION: PRESENTATIONS**

The Evolution of Real-time Energy Security in the South African Power System

Machiel Viljoen, PhD, Pr Eng, Fellow SAIEE

Corporate Consultant – Electrical Systems & Grid Interface, Eskom

Role of Agricultural Engineers in the Economy: A South African Context

Ipeleng Maroo-Maseko

SAIAE Mpumalanga Branch Chairperson and Past President

Designing with Purpose: Human-Centred Approaches for Sustainable Engineering in South Africa

Stephan Jooste, Pr Eng, PhD, MEng

Managing Director – Sustainability, Zutari

15h30 – 15h50 | **Afternoon Tea Break**

15h50–17h00 | **PLENARY ROOM: PARALLEL PAPER PRESENTATIONS, SDG 9 – DESIGN AND MAINTENANCE CONSIDERATIONS**

Infrastructure Asset Lifecycle Strategy – Vlakfontein Reservoir No. 2

Marcia Maldi, PrEng | Nhlanhla Zondo Pr Tech Eng | Trevor Mathabatha, PrEng (Rand Water)

A Review of Visual Grading Rules for Softwoods Used in Structural Applications

Marion Niwahereza: Masters Candidate - Structural Engineering, University of Pretoria.

INNOVATION ROOM: PARALLEL PAPER PRESENTATIONS, SDG 9 – INNOVATIVE DATA ASSESSMENT

Turning Education into empowerment through digital mentorship & STEM accessibility

Raheemah Kaka: Civil Engineer - Zutari

Evaluating Smart Parking Potential in Stellenbosch

Ms Brogan Hughes: Department of Civil Engineering University of Stellenbosch

Elton Jacobs

IMPACT ROOM: PARALLEL PAPER PRESENTATIONS, SDG 4, 9 & 13 – FUTURE THINKING

Moderator: Mr Ada Mukanya Dienga – ECSA Research and Knowledge Management Manager

Out-of-Plane Performance of Hardwood-Inclusive Hybrid CLT

Benedict E. Boulle: University of Pretoria

The Role of the Engineering Community in Boosting STEM Education in Marginalised South African Schools

Sizakele Mofokeng: Sizakele Mofokeng Design Technologist, GIBB

Assessment of Daily Stochastic Rainfall Generation in Southern Africa

Wendy Tjebane: Senior Civil Engineer at SRK Consulting

SUSTAINABILITY ROOM: PARALLEL PAPER PRESENTATIONS, SDG 6 – CLEAN WATER AND SANITATION

Moderator: Wihann Van Reeneen - Head of Engineering - National: Emeris

A Blueprint for Climate-Resilient Water Management in Uganda

Johan van Zyl: Water Resource management : Zutari

Assessing the Water-Energy-Carbon Nexus for Water Supply in the Mgeni System

Vernon Nagan: Senior Civil Technologist - Naidu Consulting (Pty) Ltd

Beyond Decay: Opportunities in Infrastructure Renewal – A Water Utility Perspective

Xolani Mdletshe: Technical Manager and Acting Executive Manager Water Services Overberg Water Board

INCLUSION ROOM

Women in Engineering Programme

17h00 – 18h00 | **Vote of thanks and Networking Cocktail (SAICE)**

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