

2024 Stellenbosch Engineering Industry Showcase



Engineering
EyobuNjineli
Ingenieurswese



THURSDAY, 23 MAY 2024

08:30-17:30

Century City Conference Centre

Stellenbosch Engineering Industry Showcase

Thursday, 23 May 2024



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08:30 – 09:30

Arrival, Registration, Coffee/Tea

09:30	Welcome and Faculty Overview Prof Celeste Viljoen, Acting Dean
09:50	Innovation and Western Cape Competitiveness Ms Wrenelle Stander, Chief Executive Officer: Wesgro
10:00	Keynote Address Alderman Geordin Hill-Lewis, Mayor of the City of Cape Town

Session 1

Session 2

Energy
CHAIR: PROF RICHARD WALLS

**Automation and the
Interconnected World**
CHAIR: PROF HERMAN ENGELBRECHT

10:30	Planning for Electric Mobility in Sub-Saharan Africa Prof Thinus Booysen	Autonomous Control of Vehicles Dr Callen Fisher
10:50	Thermal Systems Modelling Prof Pieter Rousseau	Digital Twins for Complex Systems Prof Anton Basson
11:10	Energy Systems Research at Stellenbosch University Prof Mike Owen	Spatial Internet of Things Prof Herman Engelbrecht
11:30	Fire Safety for Green Energy: Battery, Solar and Hydrogen Risks Prof Richard Walls	Wide Area Communication Options in the SKA Radio Astronomy Region Prof Riaan Wolhuter
11:50	Geospatial Capacity Allocation of Renewable Energy Generation and Storage of Optimised Support of the South African Grid Dr Chantelle van Staden	Shaping Tomorrow: Engineering Management's Role in Cultivating Future-Ready Professionals Prof Taryn Bond-Barnard
12:10	Inverting Loadshedding with Solar PV and Battery Storage Dr Arnold Rix	Biomedical Research Prof Kristiaan Schreve

12:30

Lunch

Session 3

Transportation

CHAIR: PROF JOUBERT VAN EEDEN

Session 4

Application of Machine Learning for Improved Industrial Processes

CHAIR: DR RENSU THEART

13:30	Taking First Steps Towards Sustainable Road Freight Prof Joubert van Eeden	Recommended for you: What Chemical Engineering Can Learn from Netflix Dr Jamie Cripwell
13:50	Innovative Traffic Data Sources Dr Megan Bruwer	Image Processing: From Virtual Reality to Deep Learning Dr Rensu Theart
14:10	Gibela Rail Projects Prof Annie Bekker	Pattern Recognition for Data Science Prof Mandla Gwetu
14:30	Health Monitoring of the SA Agulhas-II Propulsion Shaft Prof Nico de Koker	The Science of Better Dr Philip Venter

14:50 **Coffee/Tea**

Session 5

Environmental Impact of Engineering

CHAIR: PROF CHRISTIE DORFLING

Session 6

Manufacturing and Materials

CHAIR: PROF JOHN BABAFEMI

15:20	Engineers as Agents to Avoid Environmental Disasters Prof Charles MacRobert	Building Affordable Housing using 3D Concrete Printing Dr Jacques Kruger
15:40	Waste Valorization for a Circular Economy Prof Johann Görgens	Recycled Construction Materials Prof John Babafemi
16:00	Bioprocesses for a Sustainable World Prof Eugene van Rensburg	Building Your Competitive Capabilities in Manufacturing Through University Cooperation – Focus on Metals Prof Nawaz Mahomed
16:20	Metal Production for Secondary Resources Prof Christie Dorfling	High Performance Filters at 100 GHz: Ridge Gap Waveguide Dr Werner Steyn
16:40	Electrical Machine Technology: Innovations and Applications Dr Nkosinathi Gule	Structural Analysis Prof Martin Venter

17:00 **Closing**

17:30 **Cocktail Function**

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