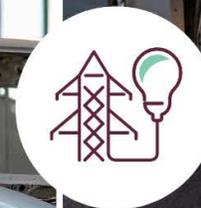


2023 Stellenbosch Engineering Industry Showcase



Engineering
EyobuNjineli
Ingenieurswese

FRIDAY, 26 MAY 2023



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9:00-17:30

Hilton Sandton Hotel

Stellenbosch Engineering Industry Showcase

Friday, 26 May 2023

Draft Programme



Engineering
EyobuNjineli
Ingenieurswese

9:00 - 10:00

Arrival, Registration, Coffee/Tea

10:00

Welcome and Faculty Overview
Prof Wikus van Niekerk, Dean

Session 1

Session 2

Energy

Automation and the
Interconnected World

10:30

Green H2 Integration and Transition
Prof Prathieka Naidoo

Autonomous Control of Vehicles
Dr Callen Fisher

10:50

Solar Thermal: Emerging Opportunities for Industry
Prof Craig McGregor

Digital Twins for Complex Systems
Dr Karel Kruger

11:10

Inverting Loadshedding with Solar PV and Battery Storage
Dr Arnold Rix

Spatial Internet of Things
Prof Herman Engelbrecht

11:30

Thermo-Cooling in Energy Generation
Dr Hannes Pretorius

Data Science in the Automotive Sector
Prof Corne Schutte

11:50

New Technologies for Wind Energy
Dr Nkosinathi Gule

Machine Learning with Limited Resources
Prof Herman Kamper

12:10

Geospatial Capacity Allocation of Renewable Energy Generation and Storage for Optimised Support of the South African Grid
Dr Chantelle van Staden

Interconnecting Communities in a Radio-Silence Protected Region
Prof Riaan Wolhuter

12:30

Lunch

Session 3

Session 4

Transportation

Manufacturing and Materials

| | | |
|-------|---|---|
| 13:30 | Fire Engineering in Transportation Prof Richard Walls | Building Affordable Housing using 3D Concrete Printing Dr Jacques Kruger |
| 13:50 | Decarbonising Logistics: An SA Export Supply Chain Perspective Prof Joubert van Eeden | Materials and Manufacturing: Analysis and Development Dr Nur Dhansay and Mr Johann Bredell |
| 14:10 | Electric Mobility in the Shadow of Loadshedding Prof Thinus Booysen | Predicting Particle Flow in Bulk Handling Applications Prof Corné Coetzee |
| 14:30 | Innovative Traffic Data Sources for South Africa Dr Megan Bruwer | Very Efficient Yield Estimation of the Microwave Performance of Very High-Accuracy Machined Parts Prof Petrie Meyer |

14:50 **Coffee/Tea**

Session 5

Session 6

Environmental Impact of Engineering

Application of Machine Learning for Improved Industrial Processes

| | | |
|-------|---|---|
| 15:30 | Engineers as Agents to Avoid Environmental Disasters Dr Charles MacRobert | Machine Learning in Separation Technology TBA |
| 15:50 | Waste Valorization for a Circular Economy Prof Annie Chimphango | Leveraging Data in Chemical- and Minerals- Processing Industries Prof Tobi Louw |
| 16:10 | Bioprocesses for a Sustainable World Prof Robbie Pott | Human-System Integration in I4.0 Environments Dr Karel Kruger |
| 16:30 | Sustainability and Metal Extraction: Role of Geometallurgy and Green Technologies Dr Margreth Tadie | Image Processing: From Virtual Reality to Deep Learning Dr Rensu Theart |
| 16:50 | Reverse Logistics for Lithium-Ion Battery Recycling Prof Louis Louw | Machine Learning in Automotive Systems TBA |
| 17:10 | Closing | |

17:30 **Cocktail and Alumni Function**