



2025

Stellenbosch Engineering Industry Showcase

WEDNESDAY, 21 MAY

08:00 - 17:00, NH Sandton Hotel



Stellenbosch
UNIVERSITY
IYUNIVESITHI
UNIVERSITEIT

Engineering
EyobuNjineli
Ingenieurswese

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08:00 - 09:00

Arrival, Registration, Tea/Coffee

09:00

Welcome and Faculty Overview

Prof Wikus van Niekerk, Dean: Faculty of Engineering

09:30

Keynote Address

Ms Mameetse Masemola, Head: Infrastructure South Africa (Acting)

10:00

Collaborating with Stellenbosch University: A Partner's Perspective

Mr Tjaart van der Walt, Founder: TymeBank

Session 1

Sustainable Development for the Environment

Session 2

Sustainable and Efficient Mining

10:30

Rethinking Human Urine as a Valuable Resource for Sustainable Sanitation and Fertilizer Production

Dr Caitlin Courtney

Smart, Digitalised, and Autonomous Systems for Efficient Mining and Processes

Dr Callen Fisher/ Prof Lijun Zhang

10:50

Integrated Biorefineries for Advancing a Circular Bioeconomy

Prof Annie Chimphango

Smarter Mining: Optimising Resources and Reducing Footprints

Dr Margreth Tadie

11:10

Tea/Coffee Break

Session 3		Session 4	
Renewable Energy		Health Technologies and Biomedical Engineering	
11:30	The Renewable and Sustainable Energy Ecosystem Prof Cristina Trois	Electrifying Biology: From Concepts to Cutting-Edge Sensors Dr Taskeen Ebrahim	
11:50	Smart Energy: Applying Machine Learning to Renewable Energy Challenges Dr Armand du Plessis	Low-Cost 3D Printing for Improved Clinical Outcomes Dr Rudolph Venter	
Session 5		Session 6	
Application of Machine Learning for Improved Industrial Processes		Advanced Manufacturing and Industrialisation	
12:10	AI-Based Industrial Engineering: Using Data for Improved Decision Making Prof Jacomine Grobler	Next Generation Manufacturing Systems Dr Boitumelo Ramatsetse	
12:30	Machine Learning Projects Prof Thomas Niesler	Industry 5.0 in Africa Prof André van der Merwe	
12:50	Networking opportunity <i>*Presenters available in venue for networking opportunity and (additional) Q&A session if required by participants.</i>		
13:00	Lunch		

Session 7		Session 8
Water Resource Management and Infrastructure		Electric Mobility - Views on Transportation, Logistics and Urban Development for Sustainable Cities
14:00	Resilient Water Infrastructure: Solutions from Stellenbosch Dr Adele Bosman	Dr Megan Bruwer Prof Thinus Booysen Prof Joubert van Eeden
14:20	Modelling and Digital Twins for Water Distribution Systems Prof Pieter Rousseau	
Session 9		
Disaster Risk Management and Climate Resilience		As engineering systems scale and interconnect, managing complexity becomes increasingly vital.
14:40	Preparing Your Business for Fire-Related Disasters and Climate Change Prof Richard Walls	We will explore: 1. Past and current related Electric Mobility research activities. 2. Key findings on Electric Mobility Ecosystem (EME) design complexity. 3. 12 key EME elements and the cross-cutting complexity. 4. Stakeholder roles to support the large-scale fleet transitions.
15:00	Renewable Energy Fuels: Waste To Energy Prof Prathieka Naidoo	
15:20		
Tea/Coffee Break		
15:45	Bridging the Gap: Turning Academic Partnerships into Industry Wins This panel dives into the real-world challenges, untapped opportunities and lessons learnt of partnering with academia in engineering. From navigating intellectual property to unlocking fresh talent and cutting-edge research, we will explore how industry can gain value through strategic collaboration with universities. Expect candid insights and actionable takeaways.	
16:45	Closing	
17:00	Cocktail and Alumni Function	

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