



PISA Annual International Conference and Golf Day 9-10 November 2017

Industry 4.0 and Associated Technologies for the Plastics Industry

THURSDAY 9 NOVEMBER 2017

Session 1

08:00 – 08:45	All delegates	Registration
08:50 - 09:00	Bob Bond, PISA	Welcome and Introduction
09:00 – 09:30	Anton Hanekom, Plastics SA	Initiatives driving growth in the SA Plastics Industry
09:30 – 10:00	Dr Raymond Patel, Merseta	Merseta's role in training for Industry 4.0 to capacitate the SA Industrial Manufacturing Sector
10:00 – 10:30	Prof. Dr.-Ing Stephan Kallweit, University of Applied Sciences Aachen	Mobile Robotics in the context of Industry 4.0
10:30 – 11:00	Tea	
11:00 – 11:30	Prof Oliver Damm, Fraunhofer Gesellschaft	The Path towards Industry 4.0 – Challenges and Opportunities
11:30 – 12:00	Dr Eckhard Schuster, Schuster Group, Germany	Werkzeugbau Ruhle development of a Smart Toolshop
12:00 – 12:30	Ms Janine Basson, PETCO – the PET plastic recycling company	Towards an understanding of the role of consumers in transitioning to a circular economy in South Africa
12:30 – 13:30	Lunch	
13:30 – 14:00	Annabe Pretorius, Plastix 911	Plastics Recycling – can it rescue the image of plastics?
14:00 – 14:30	Prof.Dr Josef Goehermann, University of Applied Sciences, Osnabruock Institute for Dual Study Programs	Technology Innovation and Marketing for the German SMME Sector and Application in South Africa
14:30 – 15:00	Dr Vincent Ojijo, CSIR	Nanomaterials Industry Development Facility: Bridging the R&D Industry Gap
15:00 – 15:30	Dr Mandla Vincent Khumalo, Tshwane University of Technology	Toughness Assessment of Thermoplastic Nanocomposites by the Essential Work of Fracture (EWF) Approach
15:30 - 16:00	Josef Schleupen, FH Aachen – University of Applied Sciences	Modern Maintenance: Monitoring of wind turbine towers and rotor blades
19:00 till late	GALA DINNER	



PISA Annual International Conference and Golf Day 9-10 November 2017

Industry 4.0 and Associated Technologies for the Plastics Industry

THURSDAY, 9 NOVEMBER 2017		Session 2
13:30 - 14:00	Prof Dr Ing. Andreas Gebhard, FH Aachen University of Applied Sciences – Goethe Lab	Overview of 3D Printing Plastics Industry Applications since introduction 1991 in Europe in Germany
14:00 – 14:30	Bob Bond, Tshwane University of Technology	Overview of 3D Printing Plastics Industry Applications since introduction 1991 in South Africa
14:30 – 15:00	Ms Laura Thurn, FH Aachen University of Applied Sciences – Goethe Lab	Additive Manufacturing – if not now, when?
15:00 – 15:30	Tea	
15:30 – 16:00	Patrick Wiesen, FH Aachen Tshwane University of Technology / IwF GmbH	Vision based autonomous flying for logistical purposes
16:00 – 16:30	Alexander Schwarz, GmbH	New design possibilities for welding of AM parts
16:30 – 17:00	Maximilian Kunkel, Siemens AG	Statistical Assessment of mechanical properties of powder-bed-fused specimen.
19:00 till late	GALA DINNER	



PISA Annual International Conference and Golf Day 9-10 November 2017

Industry 4.0 and Associated Technologies for the Plastics Industry

FRIDAY, 10 NOVEMBER 2017

09:00 – 09:20	Guillame Greyling, Stellenbosch University	Characterisation of complex macromolecular systems by Multidetector
09:20 – 09:40	Paul Eselem Bungu, Stellenbosch University	Thermal Field-flow Fractionation. Comprehensive analysis of branched polyethylene: the multiple preparative fractionation concept.
09:40 – 10:00	Megan Matthews, Stellenbosch University	Crystallisation behaviour of commercial polyethylenes and their blends
10:00 – 10:20	Sifiso Skosana, Tshwane University of Technology	Influence of fumed silica nano-sheets on the thermal, water absorption and adhesion properties of polyurethane
10:20 – 10:50	Tea	
10:50 – 11:10	Divann Robertson, Stellenbosch University	Studying crystallisation behaviour of biopolymers
11:10 – 11:30	Ben van der Westhuizen, Stellenbosch University	Polyester functionalisation for mycobacterial capture.
11:30 – 11:50	Marica Smit, Stellenbosch University	Polymer-coated magnetic nanoparticles for the efficient capture of Mycobacterium tuberculosis (Mtb)
11:50 – 12:10	Nekisa Dyayiya, Stellenbosch University	Investigating the distribution of combined antimicrobial agents within an EVOH matrix for active antimicrobial packaging.
12:10 – 13:30	Lunch	
13:30 – 13:50	Selatile Koena, Tshwane University of Technology	Electrospun anti-microbial nanofibers for active and high performance air filtration
13:50 – 14:10	Alicia Botes, Stellenbosch University	Chitosan and chitin based nanofiber biosorbents for efficient removal of Zinc from waste water
14:10 – 14:30	Janus Barnard, Stellenbosch University	The effect of additives on the properties of polyolefin films: a fundamental investigation
14:30 – 14:50	Upenya Muza, Stellenbosch University	A comprehensive analysis of the evolution of worm and jelly fish micelles by multi-detector thermal field – flow fractionation (ThFFF).
14:50 – 15:10	Rakgoshi Lekalakala, Tshwane University of Technology	Developments in Type IV cylinder for compressed gaseous hydrogen storage