

		Sunday, 22nd of January, 2017		
12:00	18:30	Arrival and Registration		
18:30	20:00	Welcome cocktail		
		Monday, 23rd of January, 2017		
08:30	09:00	Arrival of delegates		
09:00	10:30	Welcome		
10:30	10:40	Group Photograph		
10:40	11:00	Tea Break		
		Plenary Session A		
		Chair - Prof Esther Akinlabi		
		Plenary 1 - Prof. J. Dutta Majumdar		
11:00	11:45	Laser Surface Alloying of AISI 304 Stainless Steel with WC+Co+NiCr for Improving Wear Resistance		
		Plenary 2 - Prof. Xianfan Xu		
11:45	12:30	Laser-Based Methods For Sustainable Nanomanufacturing		
12:30	13:15	Lunch Break		
		Session 1 Chair - Prof Paul Mativenga	Session 2 Chair - Prof Sylvanus Wosu	Session 3 Chair - Prof Oluseyi Ajayi
13:15	13:30	Fundamentals of Mechanical Design and Analysis for AM Fabricated Parts Author: Alexander V. Manzhairov	The Effect of Rotational Speed on Thermosiphon Cooling for the Application of Drill-bit Cooling Author: J. Sequeira	Evaluation of Responses from Electrolytic Multilayer Hybrid Coating for Extended Application Author: O. Raji
13:30	13:45	Experimental Investigation of Chatter Trends in Titanium End Milling Author: Dawood A. Desai	Microstructure and Mechanical Properties of Dissimilar Metal Weld Joint between VM12-SHC and X20 Martensitic Steels Author: O.P. Oladijo	Particle Variations and Effect on the Microstructure and Microhardness of Ti6Al4V Hybrid Metal Matrix System Author: O. F. Ochonogor
13:45	14:00	Finite Element Simulation To Support Sustainable Production By Additive Manufacturing Author: Andreas Lundbäck	Determination of Residual Stresses in Roll Compacted Titanium Strips Author: S. Chikosha	Chemical Absorption of Carbon Dioxide in Biogas Purification Author: O.I. Maile
14:00	14:15	Use of indicators for hot and warm cracking in welded structures Author: J Edberg	Harmonic Analysis of Cavitation in Engine Cooling Fluid Due to Piston-Cylinder Assembly Forces Author: Peter Nyanor	Process Evaluation of a Domestic Biogas Digester Author: Nkosinathi Madushela
14:15	14:30	A Review on Cryogenic Machining of Super alloys Used in Aerospace Industry Author: Ajay Kale	Response of Natural Sisal Reinforced Polyester Composites to Three-Point and Four-Point Bending Author: Chizyuka G. Chizyuka	Equipment Maintenance Challenges and Solutions for Capacity Building and Sustainability in the Training of Engineers: The Case for the University Of Zimbabwe Author: Wilson R. Nyemba
14:30	14:45	Sustainable Analysis Of Manufacturing Silicon Nanowires For High Performance Lithium Ion Battery Anode Author: Chris Yuan	Comparison of DIC Methods of Determining Forming Limit Strains Author: Junying Min	Development of Functional Metal-organic Frameworks (MOFs) for Storing Hydrogen in Para Form Author: Jianwei Ren

14:45	15:00	Environmental Sustainability of Laser Metal Deposition: the Role of Feedstock Powder and Feedstock Utilization Factor Author: Julie M. Schoenung	Electrically-Assisted Incremental Sheet Forming of Advanced High Strength Steels Author: Junying Min	The Characteristics Of Pressure Drop And Heat Transfer Of Coils Used In Solar Collectors Author: Changnian Chen
15:00	15:30	Tea Break		
		Session 4 Chair - Prof Chris Yuan	Session 5 Chair - Prof Nicholas Perry	Session 6 Chair - Prof Edison Muzenda
15:30	15:45	Effect of Thermal & Alkali Treatment on Pterocarpus Angolensis (Mukwa) Wood Flour Author: K. Setswalo	Surface Modification of Steel Using Automotive Waste as Raw Materials Author: Farshid Pahlevani	Using Renewable Energy Sources For Power Saving: Home Appliances And Femto Cells Author: O. Akinlabi
15:45	16:00	Sustainably Manufacturing a Bamboo Bicycle in a Container Factory Author: G.A. Oosthuizen	Characterization of Bitumen/Plastic Blends for Flexible Pavement Application Author: Utibe J. Nkanga, Johnson A. Joseph	Moulding Sand Recycling And Reuse In South African Foundries Author: Farai Banganayi
16:00	16:15	Precision Cutting of Glass by Laser-assisted Machining Author: Yusuke Ito	Bioremediation of Crude Oil Contaminated Soil Using Agricultural Wastes Author: F.V Adams	Solar heating and cooling in buildings – how sustainable? Author: Vuyo T Hashe
16:15	16:30	CFD Analysis of Nanorefrigerant through Adiabatic Capillary Tube of Vapour Compression Refrigeration System Author: Oluseyi O. Ajayi	Effect of Wall Thickness on the Quality of 1060 Aluminum Produced By Sand Casting Author: Hudivhamudzimu Mugeru	Production of loose biomass briquettes from agricultural and forestry residues Author: Reuben Shuma
16:30	16:45	Cutting Force and Surface Finish Analysis of Machining Additive Manufactured Titanium Alloy Ti-6Al-4V Author: Ashwin Polishetty	Corrosion and Properties of Developed Ni-CeO ₂ Co-deposited on Mild Steel at varying Current Densities Author: M.F Phala	On Improving the Efficiency of a Solar Panel Tracking System Author: S Hassan
16:45	17:00	Specific Energy Based Characterization Of Surface Integrity In Mechanical Machining Author: Vincent A. Balogun	Dependence of Fracture Patterns in Spark Plasma Sintered Irregular Shaped Ti6Al4V Powders on Densification Author: Adewale Oladapo Adegbenjo	Improved Particle Swarm Optimization based Dynamic Economic Dispatch of Power System Author: Yanxia Sun
Tuesday, 24th of January, 2017				
08:30	09:00	Arrival of delegates		
		Session 7 Chair - Prof Junying Min	Session 8 Chair - Prof Hong Dong	
09:00	09:20	Session Keynote 1 - Resource Efficient Process Routes for Automotive Gear Shafts Author: Dr-Ing. Dirk Landgrebe	Engineering Education and Sustainability Author: Prof Paul Wosu	
09:20	09:35	Investigating the Impact of Tool Velocity on the Process Conditions in Incremental Forming of Titanium Sheets Author: G.A. Oosthuizen	Microstructural Evolution and Mechanical Properties of Laser Processed Ti6Al4V Sheets Author: Stephen A. Akinlabi	
09:35	09:50	A Model Reference Adaptive Control (MRAC) System for the Pneumatic Valve of the Bottle Washer in Beverages Using Simulink Author: Tawanda Mushiri	Electrochemical Impedance Study of an Al6063-12%SiC-Cr Composite Immersed in 3 wt. % Sodium Chloride Author: N. Idusuyi	

09:50	10:05	Optimization Strategy for Milling of Copper Using Molecular Dynamics Modelling Author: O.A. Olufayo	Numerical Investigation Of Various Fuel Injection Angles On Interaction In Cold Kerosene-Fueled Supersonic Flow Author: Lin Zhu
10:05	10:20	Innovative De-Watering Device for Effective Separation of Mud Slurry and Solids Ore in a Mining Industry Author: Abimbola O Aniki	Characterization of copper smelter dust for copper recovery Author: Okanigbe DO
10:20	10:35	Evaluation of Models for Cooling System Design in Hot Stamping Tools Author: R Muvunzi	Shot peening modeling and simulation for RCS assessment Author: A. B. Edward
10:35	10:50	Machined Surface Quality in Nano Aluminum Mixed Electrical Discharge Machining Author: A.M. Abdul-Rani	Diffusion in Saturated Clayey Barrier Medium Author: M.I. Msibi
10:50	11:20	Tea Break	
		Session 9 Chair - Prof Keith Carter	Session 10 Chair - Prof Subha Kumpaty
11:20	11:40	Session Keynote 2 - The Future of Logistics and Sustainability: Evidenced Led Behavioural Change Author: Prof Jan Havenga	Session Keynote 3 - The Future of Process Engineering for a Sustainable World Author: Prof Paul Şerban Agachi
11:40	11:55	Sustainability of Tilt-up Construction Method Author: Oke, A. E.	Provisional Equations for Determining Leachate Leakage Rate through Composite Barriers from Compromised Geomembrane Author: M.I. Msibi
11:55	12:10	Analysis for Distortion of Thin-Wall Milling On Machine Component and Its Effect on Global Warming Author: Bankole I. Oladapo	Determining Distribution Power System Loading Measurements Accuracy Using Fuzzy Logic Author: Riaan Stopforth
12:10	12:25	Influence of SiC-Ti/Al on the Microstructural and Mechanical Properties of Deposited Ti-6V-4Al Alloy with Cold Spray Technique Author: K.E, Machethe	Influence of Palm Kernel Shell Particle Size on Fade and Recovery Behaviour of Non-Asbestos Organic Friction Material Author: R. S. Fono-Tamo
12:25	12:40	Studies on Electron Beam Surface Melting of AISI 316 Stainless Steel and AISI 347 Stainless Steel Author: J. Dutta Majumdar	Crude Oil Contaminated Water Treatment: Development of Water Filter from Locally Sourced Materials Author: Feyisayo V. Adams
12:40	12:55	Studies on Electron Beam Welded Inconel 718 Similar Joints Author: Sumit K. Sharma	Experimental Investigation and FE Simulation of the Effect of Variable Control on Temperature Distribution in Orthogonal Metal Cutting Process Author: Oluseyi O. Ajayi
12:55	13:10	Surface Texturing of Sialon Ceramic by Femtosecond Pulsed Laser Author: Lerato Crescelda Tshabalala	Optimizing Public Transport Systems in Sub-Saharan Africa using Operational Research Technique: a Focus on Nigeria Author: M.C. Agarana
13:10	14:00	Lunch Break	
		Session 11 Chair - Dr Gbenga Johnson	Session 12 Chair - Prof Satish V. Kailas
14:00	14:15	Modification of Human Airways Based on MRI Data Analysis using Computational Fluid Dynamics and Additive Manufacturing Author: Subha Kumpaty	The Effects of High Cycle Thermal Loading at Mixing Tees in Pressurized Water Reactors Author: Keith F. Carter
14:15	14:30	Minimizing Carbon Emissions from Transportation Projects in Sub-Saharan Africa Cities using Mathematical Model: A Focus on Lagos, Nigeria	Bio-based energy scenarios: looking for waste Author: Maria Ester Dal Poz

		Author: M.C. Agarana		
14:30	14:45	Development of Thermomechanical Model for the Analysis of Effects of Friction and Cutting Speed on Temperature Distribution Around AISI 316L During Orthogonal Machining Author: Oluseyi O. Ajayi		Decision Support Methodology for Designing Sustainable Recycling Process Based on ETV Standards Author: Guilhem Grimaud
14:45	15:00	Improving EDM Process on AZ31 Magnesium Alloy towards Sustainable Biodegradable Implant Manufacturing Author: A.M. Abdul-Rani		Experimental investigation of ceramic substrates in standing wave thermoacoustic refrigerator Author: A.C Alcock
15:00	15:15	Influence of Temperature on Microstructure and Mechanical Properties of Ni-40Fe-10Co Alloy Consolidated by Spark Plasma Sintering Author: Isaac Moraka Makena		Performance Evaluation Of Ceramic Substrates For Regenerator Applications In Thermo-Acoustic Engines Author: S. Balonji
15:15	15:30	Effect of Ru addition on the mechanical properties and microstructure of 316L austenitic stainless steel weld metal Author: Bridget Zuma		Optimal Machine Parameters to Maximize the Accuracy of Producing Aluminum Dovetails Using WEDM Author: Dr. G.A. Oosthuizen
15:30	15:45	On a Multi-Physics Modelling Framework for Thermo-Elastic-Plastic Materials Processing Author: Evgenii Murashkin		Energy Absorption of Foam Filled Aluminum Tubes under Dynamic Bending Author: Vignesh Sampath
15:45	16:00	Characteristics of laser In-situ alloyed titanium aluminides coatings Author: Monnamme Tlotleng		Investigating the Effects of Automating Process Chains towards Sustainable Manufacturing in South Africa Author: D Hagedorn-Hansen
16:00	17:00	Extended Break		
17:00	21:00	Depart for Game Drive (Free for all registered Delegates) and Bush Dinner		
Wednesday, 25th of January, 2017				
08:30	09:00	Arrival of delegates		
		Plenary Session B Chair - Prof Tien-Chien Jen		
		Plenary 3 - Prof. Lars-Erik Lindgren		
09:00	09:45	Integrated design of material, manufacturing, product and performance		
		Plenary 4 - Prof. K. P. Rajurkar		
09:45	10:30	Review of Sustainability Issues in Non-traditional Machining Processes		
10:30	10:55	Tea Break		
		Session 13 Chair – Ms Bridget Zuma	Session 14 Chair - Prof API Popoola	Session 15 Chair - Prof Jianwei Ren
10:55	11:10	The Effects of High Cycle Thermal Loading at Mixing Tees in Pressurized Water Reactors Author: Dong Hong	Tribological behaviour of plasma sprayed Zinc-based alloy coating onto mild steel Author: O.P. Oladijo	Shakedown and Ratchetting in materials and the prediction of these behaviours in components for nuclear applications Author: Keith F. Carter
11:10	11:25	The Effect of Laser Based Synthesized Ti-Co Coating on Microstructure and Mechanical Properties of Ti6al4v Alloy Author: O.S Adesina	Optimum Design of a Stand-alone Hybrid Power System with Demand-Side Management Author: Mathias Bennet Michael	Biogas Upgrade to Biomethane from Landfill Wastes: A Review Author: Opeoluwa Dada
11:25	11:40	Modelling and Control of Flow Induced Vibration of Top–	Industrial Secondment as a Tool to Enrich Engineering	Fuzzy Logic Algorithms Based Measurement And Control

		Tensioned Marine Risers Using Analytical Methods Author: O.O. Ajayi	Education in Southern Africa Author: Tauyanashe Chikuku	System For Intermixed Biogas And Photovoltaic System Author: L. Matindife, Z. Wang
11:40	11:55	Investigation of buckling capacity of metal materials manufactured by laser 3D printing Author: Abdollah Malekjafarian	A Theoretical Review of Ecological Economic Thinking amongst Professionals in the Built Environment Author: Ndou M	New Technology to Improve the Efficiency of Photovoltaic Cells for Producing Energy Author: Bertrand Laratte
11:55	12:10	"Biodegradable" plastics: A myth of marketing? Author: K.G. Harding	Influence on Transitional Rare Earth Metal Composite on the Ternary Based Sulphate Rich Coatings Author: T. Monyai	Materials for Bipolar Plates in Polymer Electrolyte Membrane Fuel Cell: Performance Criteria and Current Benchmarks Author: O.A. Alo
12:10	12:25	Effects of Coir Fibber Loading on the Physio-mechanical and Morphological Properties of Coconut Shell Powder Filled low Density Polyethylene Composites Author: D. O. Obada	Influence of Composite Nano Coating on Ternary Sulphate Co-deposition: Corrosion and Surface Characterization Author: O. Raji	Experimental Study of the Performance of Phase Change Material Air Cooling Rig Author: Daniel M. Madyira
12:25	12:40	In-Situ Aluminothermal Reduction Synthesis of Ti3AlC2 Aluminium Composite by Friction Stir Processing Author: Satish V Kailas	Experimental Study of the Interaction of Solanum Tuberosum Fluid as Additive in Electrodeposition Bath in the Presence of Zn-TiO ₂ on Mild Steel Author: L.R. Kanyane	Vibration Analysis of the Low Speed Shaft and Hub of a Wind Turbine Using Sub Structuring Techniques Author: O.O. Ajayi
12:40	12:55	Aluminum Matrix Composites for Industrial Use: Advances and Trends Author: S.T. Mavhungu	Comparative Studies of Electrochemical and Mechanical Properties of Nickel Electrodeposited and Laser Fabricated Coatings on Steel Author: E. H. Nkuna	Evaluation of Wind Shear Coefficients, Surface Roughness and Energy Yields over Inland Locations in Namibia Author: Maduako E.Okorie
12:55	13:10	Carbon Footprint Analysis of Fibre Reinforced Composite Recycling Processes Author: Norshah Aizat Shuaib	Corrosion behaviour of austempered ductile iron produced by forced air quenching method in a simulated mine water Author: Oladeji O. Ige	Energy Demand Reduction in Milling Based on Component and Toolpath Orientations Author: Isuamfon F. Edem
13:10	13:40	Lunch Break		
13:40	14:40	Closing & Award Ceremony		

- Please note that this schedule is subject to slight changes.
- Kindly [click here](#) or go to <https://www.eiseverywhere.com/ehome/smpm/388950/> in your web browser to register.