

The Department of Mechanical Engineering Science,  
Faculty of Engineering and the Built Environment is pleased to host

**THE SECOND INTERNATIONAL CONFERENCE ON "SUSTAINABLE MATERIALS PROCESSING AND MANUFACTURING"**

North West, Sun City Resort, South Africa | March 8 - 10, 2019

**CONFERENCE ORGANISING COMMITTEE:**

**South Africa:**

- Tien-Chien Jen (Conference Chair), University of Johannesburg, South Africa
- Daniel Madyira (Co-Chair), University of Johannesburg, South Africa
- Esther Akinlabi (Co-Chair), University of Johannesburg, South Africa
- Clinton Aigbavboa (Co-Chair), University of Johannesburg, South Africa
- Khumbulani Mpofo (Co-Chair), TUT, South Africa
- Peter Olubambi (Co-Chair), University of Johannesburg, South Africa
- Dimitar Dimitrov, Stellenbosch University, South Africa
- Zenghui Wang, UNISA, South Africa
- Brendon Shongwe, TUT, South Africa
- Sisa Pityana, CSIR, South Africa
- API Popoola, TUT, South Africa
- Sunir Hassan, WSU, South Africa
- Monnamme Tlotleng, CSIR, South Africa
- Sunita Kruger, University of Johannesburg, South Africa
- Noor Ahmed, University of Johannesburg, South Africa
- Kapil Gupta, University of Johannesburg, South Africa
- Muaz Bhamjee, University of Johannesburg, South Africa
- Nkosinathi Madushele, University of Johannesburg, South Africa
- Mathope Tetelo Lekwana, University of Johannesburg, South Africa
- Madindwa Mashinini, University of Johannesburg, South Africa
- Lagouge Tartibu, University of Johannesburg, South Africa
- Mikateko Shuma, University of Johannesburg, South Africa
- Michael Agarana, University of Johannesburg, South Africa
- Peter Oviroh, University of Johannesburg, South Africa
- Stephen Ekolu, University of Johannesburg, South Africa
- Malose Chaba, Resolution Circle, South Africa
- Jianwei Ren, CSIR, South Africa
- Oluwatoyin Ewuola, University of Johannesburg, South Africa

**International:**

- Jyotsna Dutta Majumdar (Co-chair), IIT, Kharagpur India
- Paul Mativenga (Co-Chair), University of Manchester, UK
- Xianfan Xu (Co-Chair), Purdue University, USA
- Wilson Chiu, University of Connecticut, USA
- Pradeep Menezes, University of Nevada, Reno, USA
- Chris Yuan, University of Wisconsin, Milwaukee, USA
- Satish V. Kailas, IISc, Bangalore
- Nicholas Perry, AEMP, France
- Junying Min, Ruhr-Universität Bochum, Germany
- Edison Muzenda, BIUST, Botswana
- Subha Kumpaty, MSOE Milwaukee, USA
- Lars-Erik Lindgren, Lulea University of Technology, Sweden
- Sylvanus Wosu, University of Pittsburg, USA
- Lin Zhu, Anhui Agriculture University, China
- Peter Butala, University of Ljubljana, Slovenia
- MOH Amuda, University of Lagos, Nigeria
- Gbenga Johnson, University of Namibia, Namibia
- Hongyang Lu, Fudan University, China
- Junling Lu, University of Science and Technology of China, China
- Laetitia Adelard, University of La Reunion, France
- Rasheedat Mahamood, University of Ilorin, Nigeria
- Oluseyi Ajayi Covenant University, Nigeria

**CONFERENCE KEYNOTE SPEAKER LIST:**

1. Professor H. Lu, Fudan University, China
2. Professor P. Butala, University of Ljubljana, Slovenia
3. Professor L Ilon, Seoul National University, Korea
4. Professor I. Dunmade, Mount Royal University, Canada

**CONFERENCE REGISTRATION FEES:**

PARTICIPANT TYPE	COST	OPENING DATE	CLOSING DATE
Participant (Early bird)	R5000.00	20 June 2018	1 November 2018
Participant	R5,500.00	2 November 2018	6 March 2019
On-Site	R6000.00	8 March 2019	N/A
Student (with paper)	R4,500.00	20 June 2018	N/A
Student (without paper*)	R3500.00	20 June 2018	N/A

\* Student workshop

**IMPORTANT DEADLINES:**

ACTIVITY	DATE
Call for Papers advert date	12 March 2018
Abstract closing date	8 June 2018
Acceptance of Abstracts (Not more than 300 word) Notification to Participants	18 June 2018
Early bird registration open	20 June 2018
Submission of Initial Full Draft of Papers	17 August 2018
Acceptance of Initial Full Draft of Papers Notification to Participants	17 September 2018
Submission of Final Papers	1 October 2018
Acceptance of Final Paper Notification to Participants	22 October 2018
Close of early bird registration	1 November 2018

**MAIN CONFERENCE THEMES:**

**1. Environmental Policies, Standards and Education for Sustainable Engineering**

- Environmental management and ISO standards
- Legislation, education and corporate-social factors
- Awareness for sustainability in public and government
- Role of academia in sustainable engineering and development
- Engineering education for sustainable development

**2. Life Cycle Engineering**

- Product life cycle and various life phases in sustainable product developments
- Life cycle activities, life phases and life cycle decision making
- Life cycle thinking and assessment
- Life cycle assessment tools and techniques
- Case studies in life cycle engineering

**3. Sustainable Manufacturing Systems and Techniques**

- Sustainable production systems
- Process automation for sustainable manufacturing
- Advanced and hybrid manufacturing for sustainability
- Additive manufacturing
- Laser-assisted machining
- Ultrasonic-assisted machining
- Green Machining: sustainability in conventional and advanced machining
- Environment-friendly lubricants and lubrication techniques
- Minimum quantity lubrication (MQL)
- Cryogenic cooling
- Dry cutting
- Low impact manufacturing
- Energy and resource-efficient manufacturing
- Role of digital and intelligent manufacturing in sustainability
- Optimization strategies for sustainability
- Sustainability in precision engineering and micro-machining

**4. Sustainable Materials and Processing**

- Sustainability in material deposition and processing
- Green material processing technologies
- Sustainable use of materials
- Sustainable polymer recycling and processing
- Recycling of critical metals
- Bioplastics
- Powder metallurgy
- Materials testing
- Wear and corrosion of materials
- Sustainable coatings
- Identification and replacement for critical materials

**5. Sustainable Product Design and Development**

- Sustainable design, innovation and services
- Sustainable product design services
- Design for the environment
- Zero- and near-zero landfill designs for manufacture
- Design for disassembly/re-use/re-manufacturing/recycling and serviceability

**6. Sustainable Supply Chain and Business Models**

- Green supply chain and logistics
- Sustainable supply chain management
- Sustainable materials management
- Maintenance strategies for sustainable manufacturing
- Strategies and business models for sustainable development
- Business strategy and climate change
- Investment options in sustainable manufacturing

**7. Renewable Energy and Sustainability**

- Bio gas production and processing
- Solar energy
- Wind energy
- Fuel cell technology
- Hydrogen generation and storage
- Energy storage technology
- Sustainable materials management

**8. Industry 4.0 and Internet of things**

- Sustainability of current trends in automation
- Data mining in manufacturing technologies
- Sustainability of cyber-physical systems
- Sustainability of cloud and cognitive computing and manufacturing systems
- Sustainability of futuristic and advanced technologies

**9. Modelling and Simulation for Sustainable Manufacturing**

- Modelling and Simulation in Advanced Manufacturing
- Modelling and Simulation for Sustainable Development
- Sustainable Lean Manufacturing modelling
- Simulation Modelling for Sustainability
- Modelling manufacturing systems
- Optimizing Sustainable Manufacturing

**10. Other Important aspects**

- Eco tribology
- Ecological engineering
- Technology and de-growth
- Waste treatment and management
- Lean manufacturing
- Recycling and reuse
- Disassembly and remanufacturing
- Cleaner production
- Industrial case studies

**OTHER IMPORTANT INFORMATION:**

- All the manuscripts submitted to the conference will go through double blind peer review process.
- The conference proceeding will have an ISBN number.
- The Proceeding will be published by Elsevier in Procedia Manufacturing
- The conference will be EI index and will appear on Scopus.
- The selected best papers from the conference will be published in two ISI Journals: Proceedings of the Institution of Mechanical Engineers (IMEchE) - Part B: Journal of Engineering Manufacture and Part N: Journal of Nanoengineering and Nanosystems.

**For enquiries, please contact**

Tien-Chien Jen (Conference Chair)  
Email: tjen@uj.ac.za | Tel: +27 11 559-4208

**Conference website:**

<https://www.eiseverywhere.com/ehome/319898>

**Abstract Submission:**

<https://www.eiseverywhere.com/eSites/319898/Homepage>

