

Rationale

In a small world where trade is the new global driving force conquering countries and continents alike, international competitiveness is becoming the ultimate challenge. It requires high quality products manufactured with state-of-the-art technologies at low cost under the assumption of highly efficient operations management as well as clear corporate goals and strategy. This in turn is based on improved engineering training and education, relevant applied research, and an active interaction between academia and industry. The conference theme is: ***“Smart, Sustainable Manufacturing in an ever-changing world”***

The International Conference on Competitive Manufacturing (COMA '22) is taking place for the eighth time. The main objective of the conference is to present recent developments, research results and industrial experience related to Smart, Sustainable Manufacturing. A further objective of the conference is to be a generator of innovative ideas and fruitful collaboration both locally and abroad.



Scan the QR code to access the conference website or follow this link <https://www.sun.ac.za/coma>

Venue & Settings

The 8th International Conference on Competitive Manufacturing will be hosted at the Wallenberg Centre, Stellenbosch Institute for Advanced Studies (STIAS).

Stellenbosch is a town in the Western Cape province of South Africa, situated about 50 kilometers east of Cape Town, along the banks of the Eerste River. It is the second oldest European settlement in the province, after Cape Town. The town became known as the City of Oaks (or Eikestad in Afrikaans and Dutch) due to the large number of oak trees that were planted by its founder, Simon van der Stel, to grace the streets and homesteads. Stellenbosch has a vibrant, youthful culture thanks to the University, some of the world's top wines, delicious local food and lots for the whole family to experience. Undoubtedly, this creates the right atmosphere for a fruitful exchange of ideas and extensive networking.

Accommodation

Reservation for accommodation in Stellenbosch and surroundings should be made by participants themselves. Please note that the conference takes place during high season and therefore bookings should be made well in advance in order to avoid disappointment.

Bookings can be made through one of the following institutions:

Stellenbosch Travel Agency

Tel: +27 21 887 2920

info@steltrav.co.za

www.stellenboschtravel.co.za

Neelsie Travel

Tel: +27 21 883 9898

stellenbosch@neelsietravel.co.za

www.neelsietravel.com

Maties Travel

Tel: +27 21 880 0025

matiesleisure@travel.co.za

www.matiestravel.co.za

Transportation and Tours

Wine route, Cape Town, Cape of Good Hope National Reserve, Robben Island and others. Details to be mailed to potential attendants on request. Pre- and post-conference tours possible.

Car hire from Cape Town International Airport by taxi or shuttle bus: about R500 (30 min. drive). For more information please contact Stellenbosch Tourism and Information Bureau, info@visitstellenbosch.org



UNIVERSITEIT
STELLENBOSCH
UNIVERSITY



CIRP International Academy
for Production Engineering

International Conference on Competitive Manufacturing



26th – 28th January 2022

Stellenbosch, South Africa

Organised by

INDUSTRIAL
ENGINEERING
Stellenbosch University

ie ENGINEERING
EZOBUNJINELI
INGENIEURSWESE



Sponsored by:

CIRP, International Academy for Production
Engineering, Institute for Industrial Engineering



Conference Topics

PRODUCT DESIGN, REALISATION AND TECHNOLOGIES

Design for manufacturing and assembly, Reverse Engineering, CAD/CAE, Concurrent Engineering, Design for additive manufacturing, biologically inspired design approaches, Virtual prototyping, Networks in product development, Open design.

PRODUCTION TECHNOLOGIES

Expert systems in manufacturing, CAD/CAM Systems, HSC, EDM, Forming, Additive Manufacturing, Casting, Metrology, Mechatronics, Precision manufacturing, Bio-manufacturing, Robotics, Sensing, Assembly, Automation, Intelligent manufacturing, Biologically inspired manufacturing processes, Coating technology, Non-conventional machining, Environmental aspects, Machining of materials, Abrasive processes, Hybrid processes, Laser based manufacturing, Green manufacturing.

PRODUCTION SYSTEMS AND ORGANISATIONS

Production planning and control, Logistics, Modelling and simulation, SW-applications, Communication networks, 5G network applications, Social manufacturing, Learning Factory, Digital Factory, Biological transformation in production systems, Cyber-physical approaches, Big Data, Predictive Maintenance, Asset Management, Human-Machine Collaboration, Employee qualification, Human Resource Management, IoT in Manufacturing, Manufacturing Digitization Challenges, Augmented and Virtual Reality, Lean manufacturing, Sustainable manufacturing.

SUPPLY CHAIN MANAGEMENT

Supply chain track and tracing, Digital supply networks, Blockchain in supply chains, Circular economy, Artificial Intelligence for supply chains, Biological transformation in supply chains.

COVID-19: MANUFACTURING AND SUPPLY CHAIN

Post-pandemic business models, Rapid medical device manufacturing as a service, Rapid medical device manufacturing, Distributed manufacturing, Constrained supply chains, Resilient supply chains

ENTERPRISE DESIGN AND INTEGRATION

Knowledge management, Product life cycle, Human interface,

Integrated design and manufacturing, Technology and Innovation management, Total quality management, Distributed control systems, Socio-economic and environmental issues, Artificial intelligence and machine learning, Digitals twins, Virtual setup, Subscription vs selling.

Conference Details

CONFERENCE CHAIR

von Leipzig K, South Africa

CO-CHAIRS

Hummel V, Germany

Sacks N, South Africa

LOCAL ORGANISING COMMITTEE

Hagedorn-Hansen D, South Africa

Hummel V, Germany

McClelland M, South Africa

Sacks N, South Africa

Schutte C, South Africa

van der Merwe A, South Africa

von Leipzig K, South Africa

CONFERENCE SECRETARIAT

de Beer A, South Africa

Smith K, South Africa

Johnson D, South Africa

Department of Industrial Engineering, University of Stellenbosch, Private Bag X1, Matieland 7602, South Africa

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Publications

We are excited to announce that the COMA '22 proceedings will be published by **Springer Nature** in the book series: Lecture Notes in Production Engineering (TBC).

INTERNATIONAL PROGRAMME COMMITTEE

Ansari F, Austria

Bam L, South Africa

Basson AH, South Africa

Becker T, South Africa

Blaine D, South Africa

Braun A, Germany

Byiringiro JB, Kenya

Campbell I, England

Conradie P, South Africa

Damm O, South Africa

du Plessis CJ, South Africa

du Preez N, South Africa

Fourie CJ, South Africa

Genga R, South Africa

Jooste JL, South Africa

Knutsen R, South Africa

Kruger K, South Africa

Louw L, South Africa

Lucke D, Germany

Lutters E, The Netherlands

Machaka R, South Africa

Machio C, South Africa

Matope S, South Africa

Mindila AN, Kenya

Moseley S, Liechtenstein

Mpofu K, South Africa

Muvengi OM, Kenya

Ndeda R, Kenya

Niemann J, Germany

Nunthavarawong P, Thailand

Olakanmi E, Botswana

Omonigho O, Nigeria

Palm D, Germany

Pisla A, Romania

Plapper P, Luxembourg

Schlund S, Austria

Schreve K, South Africa

Sihn W, Austria

Stich V, Germany

Tarrago JM, Germany

Tshabalala L, South Africa

Tuchinda K, Thailand

van Dyk L, South Africa

Venter A, South Africa

Wegener K, Switzerland

