



# FROM PRODUCT TO PLATFORM

## THE NEW MANUFACTURING FRONTIER



TWIMS

Price: R4 260

Dates: 22 August 2023

Venue: TWIMS Campus

# Course Overview

This TWIMS Masterclass considers how the manufacturing frontier is being challenged by the rapid emergence of new platform models permeating the markets (IoT) and supply chains (Industrial IoT) of manufacturers. What are the implications of these platform technologies? What are the likely implications for South African manufacturers?

The Masterclass is exploratory in design and applies a range of strategic tools to interrogate and engage with new business models that are emerging in response to a range of “Industry 4.0” disruptors. Focusing on the Internet of Things (IoT) and industrial IoT, the Masterclass explores how these key platform enablers are disrupting manufacturing, and supporting the use of “Big Data”, Machine Learning, Artificial Intelligence (AI), Additive Manufacturing (3D printing), nano-technology-based materials and the rapidly emerging meta-verse. This Masterclass considers the consequences of these technological disruptions for markets and the value chains that supply them and explores how the range of technology disruptions are likely to re-frame manufacturing. The Masterclass includes an immersion experience in TWIMS’ Management Sandbox, which has a state-of-the-art “Industry 4.0” demonstration line encompassing Industrial IoT, Virtual and Augmented Reality, Big Data Analytics and Machine Learning, and Additive Manufacturing.

# Learning Outcomes

The day is structured to ensure all participants secure:

- An understanding of platform technologies and their associated impact on the economics of markets and value chains
- An understanding of the global drivers of change within manufacturing, and their link to firm-level strategies
- An opportunity to identify and apply strategic tools to engage with technology disruption
- An understanding of the influence of “Industry 4.0 technologies” on specific manufacturing contexts

Participants will receive a TWIMS Future of Manufacturing Masterclass Attendance certificate.

# Who Should Attend

Senior manufacturing managers and executives and public-sector executives with manufacturing portfolios. The Masterclass will be taught at a post-graduate level.



# Course Facilitators

## Justin Barnes



This course is facilitated by Professor Justin Barnes, TWIMS' Manufacturing Ambassador. Justin has worked in the South African manufacturing sector since 1995. All his qualifications are from the University of Natal, including his BA Hons (Geography), MSocSci (Development Studies), and PhD (Development Studies - industrial specialisation). Justin has developed strategies for numerous major South African firms and has advised several national governments on their industrial and trade policies. Over the last seven years, he has been exploring the impact of digital technology disruptions on the formulation of firm-level and supply-chain strategies in several manufacturing sectors and complex value chains. Justin has published extensively on the manufacturing sector, and his expertise has led him to work in over 30 countries.

## Malika Khodja



Malika is the TFG Head of Future Manufacturing at TWIMS. Malika worked as a lecturer at the Department of Mechanical Engineering at the University of Djillali Liabes University in Sidi Bel Abbes-Algeria from 2012 before moving to South Africa in 2015 to further her PhD studies on aircraft crack repair at the CSIR. She has a background in the mechanics of materials and numerical simulation, with a focus on Finite Element Analysis and fracture mechanics. Malika received her PhD in 2020.

Some of the other research she conducted was in collaboration with the CSIR and the University of Witwatersrand on the simulation of the laser shock peening process.

Her current activities are through consulting and training in additive manufacturing technologies across Africa.

She has a hands-on approach to engineering as well as consulting work, collaborating with a multidisciplinary technical team to the benefit of the customer.

Malika joined the University of Pretoria in 2021 as a Senior Lecturer in the Department of Materials Science and Metallurgical Engineering, focusing on applied research in the field of additive manufacturing and related technologies.

## Course Cost

The Masterclass costs R4 260 per participant. This is fully inclusive of all refreshments, teas and includes lunch over one day, as well as stationery. The cost excludes accommodation.

## Venue and Accommodation

The Masterclass is run at the TWIMS campus, 74 Everton Road, Kloof. The day starts at 8:30 and concludes at 16:30. Accommodation is available on-site at an additional cost. Please visit the TWIMS website ([www.twimsafrica.com](http://www.twimsafrica.com)) for further details.

## Applications

Participation is limited to 25 executives. Application for participation can be made online at [www.twimsafrica.com](http://www.twimsafrica.com). Masterclass enquiries can be directed to [andrea.govender@twimsafrica.com](mailto:andrea.govender@twimsafrica.com). TWIMS reserves the right to accept only those applicants who are likely to benefit from the course and who can make a full contribution to group activities.

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