



14th Global Congress on Manufacturing and Management (GCMM-2018)
December 5-7, 2018, Brisbane, Australia

Guest Editorial

Prasad K.D.V Yarlagadda^a, Anthony M. Xavier^b, Ian Gibson^c and Yongming Zhu^d

^aChemistry, Physics and Mechanical Engineering School, Queensland University of Technology, 2, George Street, Brisbane, Australia

^bManufacturing Engineering Department, School of Mechanical Engineering, VIT University, Vellore – 632 014, Tamil Nadu, India

^cFaculty of Engineering Technology, University of Twente, Horst Complex, 7500 AE Enschede, The Netherlands

^dSchool of Management Engineering, Zhengzhou University, 100 Science Avenue, Zhengzhou 450001, P.R. China

* Corresponding Author: Tel: +617-3138-5167
E-mail: y.prasad@qut.edu.au

© 2019 The Authors. Published by Elsevier Ltd.

This is an open access article under the CC BY-NC-ND license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Selection and peer-review under responsibility of the scientific committee of the 14th Global Congress on Manufacturing and Management (GCMM-2018).

We are delighted and proud to present a collection of the finest manufacturing and management research presented at the **14th Global Congress on Manufacturing and Management (GCMM-2018)**, which was held December 5th - 7th, 2018 in Brisbane, Australia. GCMM has a rich tradition, started by a group of internationally distinguished manufacturing and management researchers from Australia in 1990. GCMM has since gone global, held most recently in China (2016), India (2014), New Zealand (2012) and Thailand (2010) and attended by delegates from over 25 countries. After operating 28 years, GCMM is now recognized as one of longest running global forums for the dissemination of original and technologically advanced research in the broad fields of manufacturing and management. GCMM has also recently been recognized and approved by Excellence Research Australia (ERA).

This year's event was hosted by the School of Chemistry, Physics and Mechanical Engineering, Queensland University of Technology (QUT), Brisbane, Australia, and organised in association with other universities such as VIT University, India, Deakin University, Australia, Swinburne University of Technology, Australia and Zhengzhou University China. Industry partners from Australia, India and China also played an integral role. The theme of GCMM-2018 was 'Digital Manufacturing Transforming Industry toward Sustainable Growth'. This drew the attention of more than 500 researchers, industrialists and practicing professionals who submitted over 275 scientific papers in related topics from 36 countries. Six, board disciplines were considered: recent trends in manufacturing; advances in management techniques; computers in design and manufacturing; materials and manufacturing; digitisation in

manufacturing; and, advances in manufacturing and management. Various topics of the conference included, but were not limited to: virtual manufacturing; agile manufacturing; digital manufacturing in global era of cloud manufacturing, E-Commerce in manufacturing Asset and Infrastructure management, Supply chain management; operations management; manufacturing organisations structure; CAD/CAM/CIM; robotics; 3-D printing applications; composite structures and materials; digital transformation technologies; industry 4.0; big data analytics applications in digital manufacturing era; modelling and simulation of manufacturing systems; new paradigms in technology management; and, educational aspects of manufacturing and management.

We are pleased to inform you that some of the selected research papers presented in the conference are published in the Elsevier's Journal of *Procedia Manufacturing* as open access venue for manufacturing and management conference proceedings for the first time in 2018. This publication in the *Procedia Manufacturing* Journal has broadened the availability of GCMM papers and aided the widespread dissemination of research findings presented at GCMM2018. Some of the relevant and high-quality papers are also published in a special issues of the Australian Journal of Mechanical Engineering and Journal of Fluid Dynamics and Materials Processing.

The papers presented in this conference are a representative sample of technical advancements in various fields of manufacturing such as bio-manufacturing, automotive and aerospace manufacturing, nano-technology, surface engineering and high-energy rate manufacturing, amongst others. These presentations during the 14th Global Congress on Manufacturing and Management covered the fundamental and advanced principles of sustainable digital manufacturing. We hope that this collection will cater to diverse needs of academics, researchers and industry professionals, scientists, engineers, managers and policy makers interested in manufacturing and management.

The editors of this issue wish to express their sincere gratitude to their major sponsors namely: Queensland University of Technology, Brisbane; Swinburne University of Technology, Melbourne; Deakin University, Geelong; VIT University, India; Zhengzhou University, China; CIMC Technologies, China; SEW Eurodrive Pty Ltd, Brisbane; Springfield City Group, Brisbane; Intech Institute of Technology, Brisbane; Auckland University of Technology, New Zealand; and, PSG College of Technology, India.

We also wish to express our gratitude to the more than 120 reviewers and members of the GCMM2018 International Scientific and Advisory committee, for their efforts and critical, yet constructive, comments which helped the conference to maintain a high scientific and technical standard. Less than 100 papers of the 280 submitted were selected in this special issue of *Procedia Manufacturing* based on their quality and also relevance to the scope of the journal.

Lastly, we sincerely hope that the 14th GCMM conference helps realise the objective fostering collaboration and knowledge exchange between industry and academic stakeholders within Australia and abroad, for the ultimate purpose of advancement in manufacturing and management disciplines and other inter and trans-disciplinary fields.

Guest Editors

Prof. Prasad KDV Yarlagadda OAM, QUT, Australia
Prof. Anthony M Xavier, VIT University, India
Prof. Ian Gibson, Twente University, Netherlands
Prof. Yongming Zhu, Zhengzhou University, P.R. China