



## Preface

### 4<sup>th</sup> International Conference on Design and Manufacturing Aspects for Sustainable Energy ICMED-ICMPC

*May 19-20, 2023, Hyderabad, INDIA*

ICMED-ICMPC 2023 is the 4<sup>th</sup> version organized at Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, INDIA from 19-20 May 2023

ICMED-ICMPC 2023 focused primarily on Sustainable Energy and Design Aspects in Manufacturing process in manufacturing the components but encompasses perspectives from many engineering disciplines. This conference is the place to project your technical research and expertise, while also learning from and connecting with thousands of your peer researchers on a global level. At International Conference on Sustainable Energy and Design Aspects in Manufacturing researchers will experience basic discovery to translational application of new approaches and foster collaborations that engage stakeholders and partners not only from academia, but also from national laboratories, industry and government funding bodies. No other conference will provide you with broad, but salient perspectives and knowledge-sharing on technical advances within Sustainable Energy and Design Aspects in Manufacturing. This conference aims to put together the experts from these areas to disseminate their knowledge and experience for working in years to come.

#### *Topics / Tracks of the Conference:*

- Advanced machining processes
- Advanced metal welding & casting techniques
- Alternate materials /material substitution
- Composite and Polymer Manufacturing
- Coatings and its applications
- Electric Transportation and Vehicle Systems
- Power Electronic Systems and Energy Efficient Drives
- Communication Protocols and Systems used in Electric Transportation and Smart Grids
- Modelling, Simulation and Control of EV Systems
- Wired and Wireless Charging Systems
- Charging Infrastructure, Standards and Guidelines
- Machine Learning and IOT Applicable to Sustainable Energy and Electric Transportation
- New Battery Technologies
- Renewable Energy Systems, Smart Grids, Micro grids and HVDC Transmission
- Additive and lean Manufacturing Technologies
- Product Development: Effective Strategies for Moving from Engineering to Production
- Green Manufacturing processes

- Manufacturing of Modern Material
- Numerical Modelling and Simulation
- Virtual Manufacturing and Concurrent Engineering
- Robotics and Autonomous Systems.
- Advanced machining processes
- Advanced metal forming, bending, welding & casting techniques
- Alternate materials /material substitution
- Applications FEA
- Composite and Polymer Manufacturing
- Design and optimization

ICMED-ICMPC 2023 followed double blind review with minimum of two reviewers for each paper submitted. Care has been taken for plagiarism of all the article. Licensed plagiarism tool (Turnitin) has been used and ensured each article has less than 20% plagiarism

The ICMED-ICMPC 2023 peer-reviewed and accepted papers have been edited as conference proceedings to be published with E3S Web of Conferences (Open Access proceedings in Environment, Energy and Earth Sciences), which is indexed by Scopus, CPCI (Web of Science), Google Scholar, CAS, DOAJ, EBSCO, ProQuest and Ei Compindex.

As editors of this special issue of the ICMED-ICMPC 2023 proceedings, we wish to express our sincere gratitude to the plenary speakers, authors, participants, reviewers, program and technical committee members, and organizing members, who have contributed to organization of the conference and publication of this special issue. With high standard and high-quality submissions and presentations in the ICMED-ICMPC, we are very much sure, one day ICMED-ICMPC will become a leading conference in this specific academic area of 'Design and Manufacturing Aspects for Sustainable Energy'.

*Dr. Suresh Kumar Tummala (Lead Editor)*

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