

Preface

We as editors of the 7th International Conference "Sustainable Materials and Recent Trends in Mechanical Engineering" (SMARTME-2023, July 14-15, 2023, India) are glad to present to the readers' attention this collection of the selected submissions from SMARTME-2023 conference to highlight a diverse range of topics in the sphere of manufacturing materials, processes, techniques, etc.

SMARTME-2023 was aimed at providing a platform to PG students, researchers, young aspiring engineers and academicians to present their research findings in the respective fields of research, share ideas and promote dissemination of knowledge and critical discourse in their professional domains.

The articles within this proceeding represent the tireless efforts of authors as well as reviewers who helped to enhance the articles' quality and relevance by rigorous peer review. We extend our heartfelt gratitude to both the authors and the reviewers for their invaluable contributions.

We hope this edition will inspire readers to engage in meaningful dialogues and further their understanding of the subjects discussed and will serve as a source of inspiration and a catalyst for the advancement of knowledge.

Sincerely,

Dr Jegadeeswaran N

Editor- Sustainable Materials and Recent Trends in Mechanical Engineering-2023

REVA University, Bangalore, India

Committees

Chief Patron

Dr. P. Shyama Raju
Honorable Chancellor, REVA University, Bengaluru, India
Mr. Umesh Raju
Honorable Pro-Chancellor, REVA University, Bengaluru, India

Patrons

Dr. M. Dhananjaya, Vice Chancellor, REVA University, India.

Steering Committee

Dr. Rajashekhar C. Biradar, Pro-VC, REVA University, India
Dr Ramesh N, Registrar, REVA University, India.
Dr. B. P Divakar, Dean (R&I), REVA University, India
Dr. Y. Ramalinga Reddy, Director, Administration., REVA University

Chairman

Dr. K. S. Narayanaswamy, Director, School of Mech. Engg., REVA University

Conveners

Dr. Jegadeeswaran, N Prof., School of Mech. Engg., REVA University
Dr. Mahesh L, Asso. Prof., School of Mech. Engg., REVA University
Dr. Niranjan Hiremath, Asso. Prof., School of Mech. Engg., REVA University

Co-Conveners

Dr. Manjunatha L H, Prof., School of Mech. Engg., REVA University
Dr. Raju B S, Prof., School of Mech. Engg., REVA University
Dr. C D Hampali, Prof., School of Mech. Engg., REVA University
Dr. Devaraj S, Prof., School of Mech. Engg., REVA University
Dr. Nikhil Rangaswamy, Asst. Prof., School of Mech. Engg., REVA University

Treasurer

Dr. Rameshkumar S C, Asso. prof, School of Mech. Engg., REVA University

Coordinators

Dr. Hanumantharaya, Asst. Prof., School of Mech. Engg., REVA University
Dr. Shamanth V, Asso. Prof., School of Mech. Engg., REVA University

Technical Advisory Committee

Dr. Kamaraj, Professor, IITM	Dr. Harish Barshilla. Scientist, CSIR-NAL,
Dr. Ravi Kumar, Professor, IITM	Dr. Mani Maran Ratnam, USM, Malaysia
Dr. S Sankaran, Professor, IITM,	Dr. C Ram Prabhu, Scientist, DRDO
Dr. Narendranath, Professor, NITK	Dr. K Prashantha. Dean, Adichunchanagiri University
Dr. Apparao, DMRL, Hyderabad	Dr. Dinesh P, Ramaiah I T, Bengaluru
Dr. Udayabhat K, Professor, NITK	Dr. V Dilli Babu, Scientist, GTRE, Bengaluru

Reviewers Committee Members

Dr. Ramesh M. R. NITK, Surathkal
Dr. Mallikarjuna Reddy, VIT, Vellore
Dr. Kapilan NMIT, Bengaluru
Dr. Anand, NIE, Mysuru
Dr. Devaraj S., REVA University
Dr. Arunkumar K N, VVCE, Bengaluru
Dr. Manjunath Shettar, Manipal University
Dr. Manjunatha L. H., REVA University
Dr. Raju B S., REVA University
Dr. Amit Kumar, Govt collage of Engg
Dr. Sachin Kumar Patil, REVA University
Dr. Shanwaz Patil, REVA University
Dr. Shivakumar S, GIT
Dr. Suresh S, REVA University
Dr. Vijeekumar, REVA University

Dr. Shamaanth, REVA University
Dr. C. D. Hampali, REVA University
Dr. Hanumantharaya, REVA University
Dr. Dasharath S. M., REVA University
Dr. Jegadeeswaran, REVA University
Dr. Somasundar B., REVA University
Dr. Hemanth K., REVA University
Dr. Nikhil Rangasamy, REVA University
Dr. Vinod B VVCE, Bengaluru
Dr. Ganesh Chate, GIT
Dr. Manjunath G K REVA
Dr. Shrishil Sollapu, GIT
Dr. Tushar T Hawal, GIT
Dr. Vivek Tiwari, GIT
Dr. Veerbadrappa, REVA University

Organizing Committee

Dr. Manjunath G K
Prof. L. R. Jagadeesh
Prof. N. Nagasuresh babu
Dr. Balaji S.
Prof. Varadaraj K. R.
Dr. T. Veerbadrappa
Prof. Gururaja Sharma T.
Dr. Suresha S.
Dr. Vijee Kumar
Dr. Shanawaz Patil
Prof. Arun Kumar H.
Prof. Srinivas S.
Prof. Ashwini S
Prof. Madhu B P

Dr. Manjunath G.
Prof. Pradip Gunaki
Prof. Kalyan Kumar M.
Prof. Karthik S.
Prof. Sachin Prabha
Prof. Praveen Math
Prof. Avinash S.
Prof. Shreyas P. S.
Prof. Pavan D.
Prof. Arun Kumar H
Prof. Manjunath C.
Prof. Rejesh K. R.
Prof. Deepak S. A.
Mr. Somu

Keynote Speakers on 11th & 12th August 2023

Name: Prof. Dr. Edy Tonnizam Mohamad
Affiliation: Professor, UTM, Malaysia



Name: Dr. Balasubramanian Venkatraman
Affiliation: Director-DRDO



Name: Dr N Selvakumar
Affiliation: Senior Scientist, National Aerospace Laboratories (CSIR-NAL)
Topic: Innovations in Renewable Energy Materials for a Sustainable Future



Name: Mr. Ramesh Pudale
Affiliation: Autodesk



Sponsors

