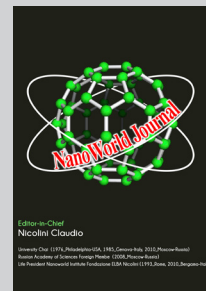


NanoWorld Journal



Preface of IMME - 2022

Department of Mechanical Engineering, Motilal Nehru National Institute of Technology Allahabad has organized International Conference on Innovations in Mechanical and Materials Engineering (IMME 2022) during November 4 - 6, 2022. The goal of this three days' hybrid mode event was to bring together the researchers, academicians, scientists, and experts from academia and industry in a single platform to exchange their ideas for a sustainable future with development through research in various disciplines of Mechanical and Materials Engineering. While sustainable development is a need of the current scenario with significant impact on the worldwide society and life style, this conference covered a wide range of Materials and Mechanical Engineering problems of different thrust areas. The conference IMME 2022 theme also align with the global vision of interdisciplinary applications of Materials and Mechanical Engineering. The chief guest of the inaugural event was Dr. Mayank Dwivedi, Director, DMSRDE, DRDO, Kanpur (India). Besides, numerous experts from across the globe delivered their talks. Total of five parallel tracks were chosen covering the major areas of Materials, Design, Manufacturing, Industrial Management, Automation, Green Energy, and Environmental aspects, aligned to which oral and poster presentations were taken place during the event. This flagship event of the Mechanical Engineering Department of Motilal Nehru National Institute of Technology Allahabad was a premier platform for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, and concerns, as well as practical challenges encountered, and solutions adopted in the fields aligned to the conference theme.

We, editors of the conference, are thankful to the leadership team, Motilal Nehru National Institute of Technology Allahabad for their support for the conduction of the event. We are also thankful to all committee members for their full-hearted support and dedication during the conference.

We are very much thankful to NanoWorld Journal of providing support to publish proceedings of the conference in their journal.

IMME 2022 received more than 200 research papers from different Institutions/Industries and finally 131 papers were qualified as per the standard of the conference theme after the rigorous peer review process. All the accepted papers were presented in the conference and were selected for publication in NanoWorld Journal We would also like to take this opportunity to express our sincere thanks to the all the keynote speakers, presenters, authors, and publication partner (NanoWorld Journal). We thank all the guest editors and reviewers who extended their support in reviewing these articles.

Guest Editors:

- 1 Prof. Avnish Kumar Dubey, Motilal Nehru National Institute of Technology Allahabad, Uttar Pradesh, India
- 2 Prof. Kailash Narayan Pandey, Motilal Nehru National Institute of Technology Allahabad, Uttar Pradesh, India
- 3 Dr. Mayank Dwivedi, Scientist G and Director, DMSRDE Kanpur, Uttar Pradesh, India
- 4 Dr. Suvash C. Saha, Faculty of Engineering and Information Technology, University of Technology Sydney, Australia
- 5 Prof. J. Ramkumar, Department of Mechanical Engineering and Design Program, IIT Kanpur, Uttar Pradesh, India
- 6 Prof. J. Paulo Davim, University of Aveiro, Santiago Campus, Portugal
- 7 Dr. Manish Gupta, Associate Professor, Motilal Nehru National Institute of Technology Allahabad, Uttar Pradesh, India
- 8 Dr. Shantanu Srivastava, Assistant Professor, Motilal Nehru National Institute of Technology Allahabad, Uttar Pradesh, India
- 9 Dr. Swastik Acharya, Assistant Professor, Motilal Nehru National Institute of Technology Allahabad, Uttar Pradesh, India
- 10 Dr. Tej Pratap, Assistant Professor, Motilal Nehru National Institute of Technology Allahabad, Uttar Pradesh, India

The following are details of the reviewers:

Reviewers

S. No.	Name	Affiliation
1	Dr. Ashish Rathore	Assistant Professor, IMI New Delhi, India
2	Dr. Manoj Kumar	Assistant Professor, NIT Jalandhar, Punjab, India
3	Prof. Kamal Sharma	GLA University, Uttar Pradesh, India
4	Dr. Deepak K. Prajapati	Research Associate, IIT Madras, Tamil Nadu, India
5	Dr. Om Prakash	Faculty, IMU Kolkata, West Bengal, India
6	Dr. Rajeev Agarwal	Associate Professor, MNIT Jaipur, Rajasthan, India
7	Dr. Uppu Srinivas Rao	Associate Professor, IIT Varanasi, Uttar Pradesh, India
8	Dr. Surya Prakash Singh	Professor, IIT Delhi, India
9	Dr. Arun Kumar Pandey	Associate Professor, BIET Jhansi, Uttar Pradesh, India
10	Dr. Meghanshu Vashista	Associate Professor, IIT Varanasi, Uttar Pradesh, India
11	Dr. Ashish Das	Assistant Professor, NIT Jamshedpur, Jharkhand, India
12	Dr. Himanshu Pathak	Associate Professor, IIT Mandi, Himachal Pradesh, India
13	Dr. Priyabrata Sahoo	Assistant Professor, IIT Goa, India
14	Prof. Satyam Shivam Gautam	NERIST, Arunchal Pradesh, India
15	Dr. Joy Prakash Misra	Assistant Professor, IIT IIT Varanasi, Uttar Pradesh, India
16	Dr. Rajitha B.	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
17	Dr. Satish Dhandole	Associate Professor, IIT BHUBANESWAR
18	Dr. P. Karuppanan	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
19	Dr. Ashutosh Upadhayay	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
20	Dr. Manoj Kumar Gupta	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
21	Dr. Shantanu Srivastava	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
22	Dr. A. K. Dubey	Professor, MNNIT Allahabad, Uttar Pradesh, India
23	Dr. Naresh Kumar	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
24	Dr. Bireswar Paul	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
25	Dr. Manish Gupta	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
26	Dr. Samir Saraswati	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
27	Dr. Binayaka Nahak	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
28	Dr. R. K. Patel	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
29	Prof. M. K. Khurana	MNNIT ALLAHABAD
30	Dr. Skylab P. Bhole	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
31	Dr. Ashwini Kumar Yadav	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
32	Dr. Swatik Acharya	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
33	Dr. Rajesh Kumar Verma	Professor, Graphic Era University, Uttarakhand, India
34	Dr. S. B. Mishra	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
35	Dr. Ashwani Pratap	Researcher, Kyoto University, Japan
36	Dr. D. K. Shukla	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
37	Dr. Mohd. Siraj Alam	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
38	Dr. Anubhav Rawat	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
39	Dr. Ramanuj Kumar	Assistant Professor, KIIT Bhubaneswar, Odisha, India
40	Dr. A. B. Andhare	Professor, VNIT Nagpur, Maharashtra, India
41	Dr. Prashant Saini	Assistant Professor, MMMUT Gorakhpur, Uttar Pradesh, India
42	Dr. Suresh Babu V.	Professor, NIT Warangal, Telangana, India
43	Dr. Ajay Bharti	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
44	Dr. Sandeep Sudeshrao Ahankari	Associate Professor, VIT Vellore, Tamil Nadu, India

45	Dr. Shuja Ahmad	Assistant Professor, Ahmadabad University, Gujarat, India
46	Dr. Bahni Ray	Assistant Professor, IIT Delhi, India
47	Dr. Biplab Kumar Debnath	Meghalaya, India
48	Dr. Sudev Das	Assistant Professor, NIT Calicut, Kerala, India
49	Dr. Vijay Verma	Assistant Professor, BIET Jhansi, Uttar Pradesh, India
50	Dr. K. Debnath	Meghalaya, India
51	Dr. Dipesh Shikchand Patle	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
52	Dr. Mohd Zaheer Khan Yusufzai	Associate Professor, IIT Varanasi, Uttar Pradesh, India
53	Dr. Mohit Tyagi	Assistant Professor, NIT Kurukshetra, Haryana, India
54	Dr. Pawan Sharma	Assistant Professor, IIT Varanasi, Uttar Pradesh, India
55	Dr. Raj Kumar Sahu	Assistant Professor, NIT Raipur, Chhattisgarh, India
56	Dr. Mamilla Ravi Sankar	Associate Professor, IIT Tirupati, Andhra Pradesh, India
57	Dr. Navjot Singh	Assistant Professor, IIIT Allahabad, Uttar Pradesh, India
58	Dr. Anindya Bhar	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
59	Dr. Audhesh Narayan	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
60	Dr. Tej Pratap	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
61	Dr. Rahul Dev	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
62	Dr. Y. G. Bala	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
63	Dr. V. R. Komma	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
64	Dr. Md. Qaisar Raza	Assistant Professor, NIT Patna, Bihar, India
65	Dr. J. C. Mohanta	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
66	Dr. Sunil Kumar Gupta	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
67	Dr. R. Prabhu Sekar	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
68	Dr. Vineed Narayanan	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
69	Prof. Rajeev Srivastava	Professor, MNNIT Allahabad, Uttar Pradesh, India
70	Prof. Mukul Shukla	Professor, MNNIT Allahabad, Uttar Pradesh, India
71	Dr. Niraj Kumar Choudhary	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
72	Dr. Navneet Kumar Singh	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
73	Dr. Nitin Singh	Associate Professor, MNNIT Allahabad, Uttar Pradesh, India
74	Dr. Jitendra N. Gangwar	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
75	Dr. P. K. Kundu	Assistant Professor, MNNIT Allahabad, Uttar Pradesh, India
76	Dr. Ashok Kumar Bagha	Assistant Professor, NIT Jalandhar, Punjab, India
77	Dr. Apurba Mandal	Assistant Professor, NIT Uttarakhand, India
78	Dr. Sarang Pande	Professor, Marwad University, Gujarat, India
79	Dr. Pankaj Kumar Shrivastava	Professor, IIT Delhi, India
80	Dr. Anand S. Reddy	Professor, KLE Institute of Technology, Karnataka, India
81	Dr. R. Santhosh	Assistant Professor, IIT Varanasi, Uttar Pradesh, India
82	Dr. Sahil Kalra	Assistant Professor, IIT Jammu, India
83	Dr. Vishal Singh Chauhan	Associate Professor, IIT Mandi, Himachal Pradesh, India
84	Dr. Rajesh kumar Verma	Professor, HBTU Kanpur, Uttar Pradesh, India
85	Dr. Prashant Baredar	Professor, MANIT Bhopal, Madhya Pradesh, India
86	Dr. Arunesh Srivastava	Professor, Ansal Technical Campus, Uttar Pradesh, India
87	Dr. Sanjay M. R.	Senior Research Scientist, KMUT North Bangkok
88	Dr. T. U. Siddiqui	BMS College of Engineering, Bengaluru, Karnataka, India
89	Dr. Anas Ahamad Siddiqui	Assistant Professor, Shershah Engineering College Sasaran, Bihar, India
90	Dr. Kumar Nishant Ranjan Sinha	Postdoctoral Research Associate, TU Darmstadt, Germany

91	Prof. Dhananjay Singh	IET Lucknow, Uttar Pradesh, India
92	Dr. Himanshu Bisariya	Project Scientist, LARPM-CIPET, Bhubanewar, Odisha, India
93	Dr. Anand Pandey	Professor, Manipal University Jaipur, Rajasthan, India
94	Dr. Avadesh Kumar Sharma	Associate Professor, Rajkiya Engineering College Manipuri, Uttar Pradesh, India

Received: July 18, 2023

Accepted: July 19, 2023

Published: July 20, 2023

Citation: Preface of IMME - 2023. *NanoWorld J* 9(S1): 115-118.

Copyright: © 2023. This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY) (<http://creativecommons.org/licenses/by/4.0/>) which permits commercial use, including reproduction, adaptation, and distribution of the article provided the original author and source are credited.

Published by United Scientific Group