



**Second  
International Conference  
on**



**ADVANCES IN THERMAL SYSTEM,  
MATERIALS AND DESIGN ENGINEERING  
(ATSMDE – 2024)**



**27<sup>th</sup> - 28<sup>th</sup> DECEMBER 2024**

**OFFLINE MODE**



**ORGANISED BY**



**Department of Mechanical Engineering**

**VEERMATA JIJABAI TECHNOLOGICAL INSTITUTE (VJTI), Matunga, Mumbai  
in Association with**

**Directorate of Technical Education, Maharashtra State  
University of Mumbai**

**Institute of Chemical Technology, Mumbai**

**Mech. Engg. Dept. Indian Institute of Technology Bombay**



## Background:

The conference would be a two-day event aiming at building collaboration between the participants and research organizations and industries in order to develop better technological solutions for future needs. Research scholars, academicians, and working professionals will share their knowledge, experiences, innovations, and inventions. The event will include plenary sessions, invited talks by eminent personalities, along with technical paper presentations. The key objective of this conference is to provide an opportunity to participants to showcase their novel developments in the underlying research areas of mechanical engineering. VJTI successfully organized its first International Conference in 2017 and all accepted papers were published in SSRN Elsevier

(<https://www.ssrn.com/link/ATSMDE-2017.html>)

## About VJTI:

With over 137 Years of service to mankind, Veermata Jijabai Technological Institute (formerly Victoria Jubilee Technical Institute) with a reputation has established a benchmark in the field of education, technology and research. The institute offers over twenty-seven courses in various disciplines of Engineering and Technology at number of stages ranging from Diploma, Degree, Post- Graduate and Ph.D. programs. VJTI is proud of its remarkable contribution for imparting quality technical education along with overall development of the society as well as impact educational heritage.

## Who can attend:

Master students, research scholars, academicians and industrial personnel working in the fields of thermal systems, materials, manufacturing and design engineering can participate in this conference. This would bring researchers and experts on a common platform for sharing knowledge, expertise and experience in the latest technologies being adapted in the field of thermal systems, materials, manufacturing and design engineering which will help in bridging the gap between academic, research and industry.

Authors are requested to send their original papers based on research work/field experience in the categories listed above. **All the papers will be reviewed by referees and accepted papers will be published in the reputed Conference Proceedings.**

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# CALL FOR PAPERS

## Conference Theme:

The theme of the conference is “Advances in Thermal System, Materials and Design Engineering”. It emphasizes the need for advancements in the three basic directions of Mechanical Engineering and to establish their connection with real-life problems. The above theme encourages conference participants to think about this educational need in our increasingly complex everyday world.

## Areas to be covered but are not limited to :

### Track 1

#### Thermal Engineering

Renewable Energy Systems  
Energy Storage  
Modelling of Thermal Systems  
Fluid Structure Interaction  
Micro-fluidics  
MultiPhase Flow and  
Experimental Turbulence  
Alternative Fuels for Combustion  
Technology  
Green Hydrogen  
Low Temperature Refrigeration  
and Cryogenics  
Advances in HVAC Systems  
Computational Fluid Dynamics  
Advance Heat Transfer - Fins  
application  
Non Fourier Heat Transfer with  
HMT  
Automotive Technologies <  
vehicle Dynamics  
Hybrid and Electric Vehicles  
Battery management for range  
extension  
Vehicle Emissions and new  
norms for Pollution  
High Speed Flows  
Hydrogen Combustion  
Thermal Protection Systems  
Electronic/Data Center Cooling  
systems  
Digital Transformation

### Track 2

#### Design Engineering

Robotics  
Biomechanics and Engineering  
Dynamics and control of Complex  
Systems  
Fracture Mechanics  
Design of Experiments  
Experimental and Computational  
Methods  
Design and Operation of  
Transportation Systems  
Drone Designing  
AI and ML in hydrodynamically  
lubricated and  
elastohydrodynamically lubricated  
contacts  
Analysis and Synthesis of  
mechanisms  
Design of Defense systems  
Design of Biomimetic devices  
Noise, Vibration and Harshness  
Product Design  
Autonomous vehicle  
Mechatronics  
simulation and modeling  
Reliability  
Design of process equipment  
Solid Mechanics  
Design for Quality  
Multi physics  
Thin films  
Theoretical geometry and Graphics

### Track 3

#### Material Science and Manufacturing

Bio Materials  
Additive and Sustainable  
Manufacturing Practices  
Advance Composites and their  
Applications  
Characterization and Microscopy  
Additive Manufacturing/ 3D  
Printing  
Non Traditional Machining  
Material Synthesis and Processing  
Nanotechnology  
Rapid Manufacturing  
Intelligent Manufacturing Systems  
Micro Manufacturing  
Supply Chain Management  
Optimization of Manufacturing  
Processes  
Smart Material  
Manufacturing Processes for  
Biomimetic devices  
Machining of Hard and smart  
Materials  
Surface Integrity analysis during  
machining  
AI and Sustainable Manufacturing  
Forming, Joining and  
Characterization of sheetmetal  
New Energy Material  
Reverse Engineering  
AI/ML & Intelligent mobility  
Digital Twin, Cyber security, Cloud  
Design, Modelling, CAE & Virtual  
Simulations

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## Important dates:

*Submission of manuscript :* 04<sup>th</sup> Nov. 2024  
*Communication of reviews :* 15<sup>th</sup> Nov. 2024  
*Notification of paper acceptance :* 30<sup>th</sup> Nov. 2024  
*Submission of camera ready manuscript:* 15<sup>th</sup> Dec. 2024  
*Last date for Registration:* 20<sup>th</sup> Dec. 2024



## Full length paper submission Link:

<https://forms.gle/2947wrRSepJiwxC8>

\*\*\* e-mail ID & Contact for Correspondence: \*\*\*

[atmsde2024@me.vjti.ac.in](mailto:atmsde2024@me.vjti.ac.in) Contact: 9899173847, 7385202811.

\*Detail information about conference will be uploaded on

VJTI website: [www.vjti.ac.in](http://www.vjti.ac.in)

## Registration fees:

*Research scholar : Rs. 1000*

*Faculty : Rs. 2000*

*Industry : Rs. 3000*

*Foreign delegates : USD 200*

## Payment link for Participation/registration:

<https://www.onlinesbi.sbi/sbicollect/icollecthom.e.htm?corpID=365247>

