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National Institute of Technology Puducherry, India

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National Institute of Technology Puducherry, India

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National Institute of Technology Puducherry, India

**Dr. R. Naveen Raj**  
National Institute of Technology Puducherry, India

# 14 to 16 Dec, 2022

## KEYNOTE SPEAKERS

**14 DEC | 10:30 AM Prof. Gautam Biswas**  
Indian Institute of Technology Kanpur, India

**14 DEC | 02:30 PM Prof. Duc Truong Pham**  
University of Birmingham, UK

**15 DEC | 10:30 AM Prof. Jayashree Bijwe**  
Indian Institute of Technology Delhi, India

**15 DEC | 02:30 PM Prof. Surendra M. Gupta**  
Northeastern University, USA

**16 DEC | 10:30 AM Prof. S. Senthilvelan**  
Indian Institute of Technology Guwahati, India

**16 DEC | 02:30 PM Prof. R. Gnanamoorthy**  
Indian Institute of Technology Madras, India

## IMPORTANT DATES (REVISED)

	CATEGORY I ABSTRACT SUBMISSION	CATEGORY II FULL PAPER SUBMISSION
Abstract submission deadline	<b>23 NOV</b>	Manuscript submission deadline
Notification of acceptance of Abstract	<b>28 NOV</b>	Review comments to Authors
	<b>02 DEC</b>	Revised manuscript submission
	<b>03 DEC</b>	Notification of acceptance of manuscript
Registration for the conference	<b>05 DEC</b>	Registration for the conference

Revised Registration Fee CATEGORY	INDIAN		FOREIGN	
	Early Bird Fee Before 25 NOV	Regular Fee After 25 NOV	Early Bird Fee Before 25 NOV	Regular Fee After 25 NOV
Delegates from Academic Institutes	₹ 3,000* ₹ 7,500**	₹ 4,000* ₹ 9,000**	\$ 40* \$ 95**	\$ 50* \$ 110**
Delegates from Industry/R&D Organisations	₹ 3,000* ₹ 7,500**	₹ 4,000* ₹ 9,000**	\$ 40* \$ 95**	\$ 50* \$ 110**
Students (Post Graduate/Ph.D.)	₹ 2,000* ₹ 6,500**	₹ 3,000* ₹ 8,000**	\$ 25* \$ 80**	\$ 40* \$ 95**
Listener (Not presenting any study)	₹ 1,500	₹ 2,500	\$ 18	\$ 30

\* Abstract Only Submission, \*\* Full Paper Submission, ₹ - INR, \$ - USD

for any clarification or further information contact

**Dr. A. Johnney Mertens**  
Chairman, ICOFT 2022

Department of Mechanical Engineering,  
National Institute of Technology Puducherry, Karaikal - 609 609, India  
Email: [icof2@nitpy.ac.in](mailto:icof2@nitpy.ac.in) | <https://www.icof2022.com>

## THIRD

International Conference on  
Future Technologies in

# Manufacturing, Automation, Design & Energy

**ICOFT**  
MADE  
2022



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Organised by  
**Department of Mechanical Engineering**  
NATIONAL INSTITUTE OF TECHNOLOGY PUDUCHERRY  
An Institute of National Importance under Ministry of Education, Govt. of India

## ABOUT THE CONFERENCE

ICOFT 2022 is third in the series of conferences intended to be held every year in India, aimed to disseminate knowledge on the latest technological developments and cutting-edge research in Manufacturing, Automation, Design, and Energy (MADE) among academicians, researchers, scientists, industry personnel, and entrepreneurs across the globe. This conference will provide the premier interdisciplinary forum relevant with Mechanical Engineering to discuss the recent technologies, innovations, recent research findings, challenges, solutions, and perspectives of the future directions of Mechanical Engineering in the field of Manufacturing, Automation, Design, and Energy through keynote lectures and paper presentations. **Young researchers are encouraged to participate and utilize the opportunity to network with others who seek to develop their research abilities and experience.**

## OBJECTIVE & SCOPE OF THE CONFERENCE

The objective of the ICOFT 2022 is to provide a platform to perceive, share, and exchange the recent trends related to various aspects of Mechanical Engineering. The scope of this conference is multidisciplinary in Mechanical Engineering and invites original work to be presented in multiple streams of Manufacturing, Automation, Design, and Energy (MADE).

## THE INSTITUTE

National Institute of Technology Puducherry (NIT Puducherry) is the 31st institute of NIT Fraternity established in 2009, as a part of the Nation's Eleventh Five-Year Plan (2007–2012). It is officially recognized as an Institute of National Importance under the Ministry of Education, Government of India. The Institute is nestled in the coastal enclave of the Kaveri river basin in Karaikal, Union Territory of Puducherry. The campus is spread across 258 acres plot of land located near the village of Poovam and around 7 km from the city's heart. Currently, 61 faculty members and 31 non-teaching staff are employed for the overall strength of 939 students.

**NIT Puducherry is committed to produce competent and responsible technocrats who can serve the nation on its journey to growth and prosperity.** The Institute provides keen guidance to sculpt bright minds into professionally balanced individuals through expert and experienced faculty members and facilities. The Institute is constantly attempting to scale new heights by developing a synergy between academics, research, and practice. NIT Puducherry is ranked 136 under the Engineering Institutes category in the NIRF India Ranking 2021 released by the Ministry of Education, Government of India.

## MECHANICAL ENGINEERING DEPARTMENT

The Department was established in July 2014 with an Undergraduate Program and currently offers Postgraduate and Doctoral Program. New Education Policy (NEP) curriculum is implemented to ensure the core courses with the latest developments, social context, and environmental relevance of the present and future world. At present, 12 dedicated and competent faculty members with expertise in diverse domains of Mechanical Engineering such as Thermal and Fluid Sciences, Design, and Manufacturing. The specialization in the various fields of Mechanical Engineering such as Industry 4.0; Energy; Design Automation; New Materials and Manufacturing processes; Smart Manufacturing; Vehicle Dynamics; Liquid Spray characteristics; Computational Mechanics; Ergonomics; Welding; Vibrations contribute to the Department knowledge hub. The Department is actively conducting various sponsored projects from the agencies or schemes such as DST-SERB, DST-INSPIRE, DST-UKIERI, ARTPARK, BRICS, and providing consultancy services to organizations such as ONGC, CPWD, and CPCB. **The Department is in the pursuit of establishing world-class academic and research facilities and emerge as a prominent source of practical engineering knowledge.**

## CALL FOR PAPERS

**Original research papers** on the topics of interest for submission include, but are **not limited to the following domains**

### MANUFACTURING

Additive Manufacturing | CAD/CAM/CAE | Reverse Engineering  
Composite and Polymer Processing | Machine Tool Design  
Ergonomics in Manufacturing | Materials Technology  
Machining, Forming and Joining Technology  
Digital Manufacturing and Smart Systems  
Green and Sustainable Manufacturing  
Micro and Nano Manufacturing  
Modelling and Simulation in manufacturing  
Non-Traditional / Advanced Machining processes  
Metrology and Quality Control | Precision and Surface Engineering

### AUTOMATION

CAD and Automation; Design Automation  
Process Automation & Monitoring  
Sensor Technology; UAV, AUV  
Robotics and Automation  
Modeling and simulation; Optimization Algorithms  
Augmented Reality (AR) / Virtual Reality (VR) in Automation  
Industry 4.0; Industrial Internet of Things | Manufacturing Automation

### DESIGN

Design theory, Methodology and Management  
Aerospace Design | Bioengineering Design  
Tribology | Vibration | Vehicle Dynamics  
Product Design and Development  
Design for X and Additive Manufacturing  
Design for Ergonomics | Design with Composite Materials  
FEA and its applications | Industrial Design; Mechanical Design

### ENERGY

Energy Modelling, Simulation & Optimizations  
Energy Storage; Hydrogen and Fuel Cells  
Energy Security & its policies  
Net zero Energy concepts  
Micro & Nano Energy Materials  
Renewable Energy Sources and its Technologies  
Other Conventional Energy Sources and its Technologies

## MANUSCRIPT SUBMISSION



Authors are invited to submit their manuscripts through *EasyChair* portal only. Refer **CALL FOR PAPERS** section of the website.

## SUBMISSION GUIDELINES

Abstracts and manuscripts should reflect a substantial advancement in the field of Mechanical Engineering.

**Category I (Abstract Submission):** The length of the abstract shall not exceed 300 words. The abstracts will be published in the Conference Souvenir. One of the authors is required to attend the conference to make a brief presentation of the submitted work. Submissions should highlight the novelty of the work.

**Category II (Full Paper Submission):** Regular paper submissions shall not exceed 8 (eight) pages, including bibliography. One of the authors is required to attend the conference to make a complete presentation of the work.

## FORMATTING INSTRUCTIONS

**All manuscripts must be written in English** and use templates that can be downloaded from the conference website. **Only PDF files will be accepted for the review process.** Download Template from website, **CALL FOR PAPERS** section.

## POLICY OF PLAGIARISM

All submitted abstracts and manuscripts will be subjected to "Similarity check" by a licensed version of "iThenticate: Plagiarism Detection Software". Articles achieving a minimal similarity index (less than 10%) alone will be examined, and those deemed unacceptable will be rejected/withdrawn without a formal review. Submissions should also ensure less than 2% similarity from a single source.

Authors are requested to refrain from plagiarism in any form. Authors should submit their original and unpublished research work, which is not under consideration for publication elsewhere. Manuscript with a higher similarity index will be rejected during any review stage. As per the copyright transfer agreement, authors are deemed individually and collectively responsible for the content of manuscripts published by them. Hence, it is the responsibility of each author to strive for the highest ethical standards concerning plagiarism.

## REVIEW & PUBLICATION

Eminent experts from respective domains will perform peer reviews of the manuscripts. At least one of the authors should register for each accepted paper and present the findings.

**Only the registered and presented manuscripts in the Conference along with the acceptance of Session Chair(s) will be recommended for publication in any one of the following Journals.**

1. Advances in Science and Technology (AST), [www.scientific.net](http://www.scientific.net)
2. IOP Conference Series: Materials Science and Engineering
3. Materials Today: Proceedings
4. International Journal of Vehicle Structures and Systems

**In addition, papers from the conference will be published by below mentioned publications as a proceedings book volume. Publications will conduct quality checks on the accepted papers and only papers that pass these checks will be published.**

