# **BROAD AREAS: (Not Limited to)**

## **PROPULSION & HEAT TRANSFER**

- Advances in Space Propulsion & Electric Propulsion
- · Clean Combustion
- Green Propellants
- Cryogenics
- · Thermal Analysis
- Heat Exchangers
- Combustion, Performance & Emission

## **MATERIALS & COMPOSITES**

- · Smart Materials
- Additive Manufacturing
- 3-D Printing
- Modelling and Simulation Technologies
- · Structural Analysis
- Corrosion
- · Composite Materials
- Advanced Joining Methods

## **SPACE TECHNOLOGY**

- Space Dynamics and Interplanetary Trajectory
- · Defence and Security Systems
- · Space Resource Utilization
- Astrophysics
- · Lander Technology for Space
- Orbital Mechanics
- Rocket Design
- · Satellite Collision Avoidance
- Space Debris
- Space Colonization

#### **EXP. & COMP. AERODYNAMICS**

- · Wind Tunnel Testing
- Shock Waves
- Hypersonic Aerodynamics
- Re-entry Aerodynamics
- Acoustics
- · Aero-elasticity
- · Fluid Structure Interaction
- Flow Visualization
- Boundary Layer Interaction

## **UAS & SYSTEM ENGINEERING**

- Digital Aviation
- · Aircraft Maintenance
- · Civil Aviation & Space Policies
- Intensive CAD/CAM
- · Aircraft Design
- · Launch Vehicles System
- · Societal Application Drones
- · Autonomous Air Vehicles
- Swarm Technologies

#### **AVIONICS GUIDANCE & CONTROL**

- · Aviation 4.0
- · Human System Interaction
- · Sensors & MEMS
- Digital Twinning
- Mechatronics, Microelectronics in Aerospace Systems
- · Automation Control and Robotics
- · Structural Health Monitoring
- Spacecraft System Design & Control

# **CALL FOR PAPERS**

Academicians, researchers and industry professionals are being invited to submit their original research papers previously unpublished, not currently under review by another conference or journal. All submissions will be subjected to at least two blind reviews. Acceptance will be based entirely on quality, relevance and originality. The authors can send their Abstracts/ Full paper(s) online. The template for submission is provided at the conference website:

Submit your Abstracts/Full paper(s) through the website link: https://www.karunya.edu/daero/icraae-24/

The selection for oral presentation will be strictly as per the feedback from the technical review committee. All selected peer-reviewed research/review papers presented in the conference will be recommended for publication through our supporting publishing partners.

## **IMPORTANT DATES**

Abstract Submission Deadline 2 December 202			
Notification of Abstract Acceptance	10 December 2023		
Full Paper Submission Deadline	10 January 2024		
Last date for Revised Paper Submission	20 January 2024		
Last date for Registration	15 February 2024		
Conference Dates	29 & 30 March 2024		

REGISTRATION FEE					
REGISTRATION FEE		AeSI Members		Others	
	DELEGATE CATEGORY	INR	USD	INR	USD
	Under Graduates/Post Graduates	3500	75	4000	100
	Research Scholar	4500	100	5000	120
	Academia	6250	125	7000	150
	Industry	9000	175	9500	200
	Listeners (Accompany Delegates)	1500	60	2000	100

The registration fee includes

- · Entry to all sessions, tea/snacks, and lunch
- Conference Kit
- · Certificate to all authors

Registration fee does not include journal publication charges

## SUPPORTING PUBLISHING PARTNERS

- Journal of Aeronautics, Astronautics and Aviation (Scopus & ESCI)
- Journal of Integrated Science and Technology (Scopus)
- Strojniski Vestnik/Journal of Mechanical Engineering (Scopus & SCIE)
- · High Temperature Corrosion of Materials (Scopus & SCIE)
- New Space (Scopus & ESCI)

Check **Publication tab** in website for updated Supporting Publishing journals to be added shortly

#### **REACH US**



#### Get in touch with us

Dr. S. Venkatachalam Member Secretary ICRAAE-24 © +91-9791175905

□ icraae@karunya.edu

Payment link: https://eduserve.karunya.edu/Online/ExternalEvents.aspx









Karunya Institute of Technology & Sciences, Coimbatore, India

In Association with

Aeronautical Society of India (AeSI) - Chennai Branch

## **KARUNYA INSTITUTE OF TECHNOLOGY & SCIENCES**

Karunya Institute of Technology and Sciences, was founded with the noble vision to raise professionals and leaders of high academic calibre and unblemished character, nurtured with a strong motivation and commitment to serve humanity. The institution is the fulfillment of the vision of its founders Late Dr. D. G. S. Dhinakaran and the present Chancellor Dr. Paul Dhinakaran. Established in 1986 as an Engineering College, it was granted an autonomous status in 1999 and declared Deemed-to-be University by the University Grants Commission (UGC) in recognition of its academic excellence by the Ministry of Human Resources Development under section 3 of the UGC Act, 1956 vide notification no 9-3-2000-U3 dated 23.6.2004 of the Government of India. Accredited by NAAC with the highest grade A++, the institution offers a wide array of Bachelors. Masters and Doctoral Degree programmes in various branches of Engineering, Biotechnology, Food processing and Agricultural Sciences. From a humble beginning of 180 students, the institution has rapidly grown to 8000 + students and 450+ faculty representing 18 academic divisions.

In the three decades of service to higher education, Karunya Institute of Technology and Sciences has made significant progression in teaching learning, research and consultancy, innovation and transfer of technology, community service and value education. Translating the vision of the Founders into action, the institution is currently engaged in finding solutions to human problems in the four major areas such as Water, Food, Healthcare, and Sustainable Energy through scientific and technological interventions

## **DIVISION OF AEROSPACE ENGINEERING**

The Division of Aerospace Engineering at Karunya Institute of Technology and Sciences (KITS) was launched in the year 2009 with the primary objective of producing Aerospace Engineers to meet the growing demand and to serve the civilian aeronautical as well as the defense-oriented sectors. Our budding engineers acquire skills in core domains like Aerodynamics, Stress Analysis, Materials and Structures, Aircraft Design, Propulsion, Space Dynamics, Artificial Intelligence & Machine Learning, Smart Manufacturing that enable them to understand physical laws and cruise through time and space being creative and innovative, thus opening up the limitless opportunities in an endless space. The students are trained in aerospace design and analysis software and offered value-added courses in Digital Manufacturing, Artificial Intelligence in Aerospace manufacturing, Value Engineering etc., to keep them abreast with the latest developments. Over the years the Division of Aerospace Engineering has groomed 600+ engineers who have grown to occupy strategic positions at research organizations like GTRE and NAL, MNCs like Accenture, Capgemini, and Infosys, and in highly reputed companies like Quest Global, Agnikul Cosmos, Boeing, Team Indus etc., to name a few.

## **ABOUT THE CONFERENCE**

The 2<sup>nd</sup> International Conference on Recent Advances in Aerospace Engineering aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of Aerospace Sciences. It also provides a premier interdisciplinary 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 of Aerospace.

## **OBJECTIVES OF CONFERENCE**

Prospective authors are kindly encouraged to contribute to and help shape the conference through submissions of their research abstracts and papers. Also, high quality research contributions describing original and unpublished results of conceptual, constructive, empirical, experimental, or theoretical work in all areas of Aerospace are cordially invited for presentation at the conference.

#### **CHIEF PATRONS:**

Dr. Paul Dhinakaran, Chancellor, KITS

Mr. Samuel Paul Dhinakaran, Trustee, KITS

#### **PATRONS:**

Dr. G. Prince Arulraj, Vice-Chancellor, KITS

Dr. E. J. James, Pro Vice-Chancellor,

Strategy, Innovation & Research, KITS

Dr. Ridling Margaret Waller, Pro Vice-Chancellor,

Quality Standards, KITS

Dr. R. Elijah Blessing, Registrar, KITS

Dr. D. Nirmal, Associate Dean, School of Engg. and Tech., KITS

Prof. Dr. C. Senthil Kumar, Chairman, AeSI-Chennai Branch

#### **CO-PATRONS:**

Dr. D. Tensing, Director-IQAC, KITS

Dr. K. R. S. Krishnan, Director-Innovation, Incubation & Entp., KITS

Dr. Madhu Ganesh, Director-Twinning Programme, KITS

Mr. G. John Edison, Director-Training & Placement, KITS

Dr. S. J. Vijay, Director-Research and Consultancy, KITS

Dr. S. Albones Raj, Director Students Affairs, KITS

Shri. CA. A. Joseph Amulraj, Finance Officer, KITS

Dr. P. S. Prem Kumar, Honorary Secretary, AeSI-Chennai Branch CONVENOR:

Dr. G. Jims John Wessley, Head, Aerospace Engg., KITS

## **ORGANIZING SECRETARY:**

Dr. Aldin Justin Sundararaj, Asst.Prof., Aerospace Engg., KITS MEMBER SECRETARY:

Dr. S. Venkatachalam, Asst.Prof., Aerospace Engg., KITS

Dr. K. Anton Savio Lewise, Asst. Prof., Aerospace Engg., KITS

## Member Coordinators

Dr. D. Robinson Smart, Prof., Aerospace Engg. KITS

Dr. Prawin Angel Michael, Asso. Prof., Aerospace Engg. KITS

Mrs. R. Gayathri, Asst. Prof., Aerospace Engg. KITS

Dr. Sushanlal Babu, Asst. Prof., Aerospace Engg. KITS

Mr. L. Prawin, Asst.Prof., Aerospace Engg. KITS

Dr. R. Ajith Raj, Asst. Prof., Aerospace Engg. KITS

Mr. S. Sherbin Sam, Asst.Prof., Aerospace Engg. KITS

Ms. S. Sreemathi, Asst. Prof., Aerospace Engg. KITS

Mrs. Rosy Subha Hannah. Asst. Prof., Aerospace Engg. KITS

#### TECHNICAL ADVISORY COMMITTEE

## International

Dr. Erick C. Jones, University of Nevada, Reno, USA

Dr. Chithirai Pon Selvan, Curtain University, Dubai

Dr. Arasan Uthayasuryan, ENSTA, Paris

Dr. Priya Vishnu, Massey University, New Zealand

Dr. Gopalan Jagadeesh, Professor, IISc, Bangalore

Dr. Roshan Thomas, The Pennsylvania State University, USA

Dr. Beulah Moses, University of Sydney, Australia

Dr. Mohd Rafie Johan, University of Malaya, Malaysia

Dr. Obed Samuelraj Isaac, Duke University, NC, USA

Dr. Josua Meyer, Stellenbosch University, South Africa

Dr. Nishanth Pushparaj, Nottingham, UK

Dr. Mohsen Sharifpur, University of Pretoria, South Africa

Dr. Josua Meyer, Stellenbosch University, South Africa

Dr. Alon Gany, Technion Israel Institute of Technology, Israel

# **National**

Dr. A. M. Pradeep, IIT-Bombay

Dr. T. Javachandran, IIT-Madras

Dr. R.C. Mehta, NI Centre for Higher Education, Nagercoil

Dr.M. S. Mahesh, IIT-Hyderabad

Dr. Arnalt Stalin, BHEL, Ranipet

Dr. Benny Karunakar, IIT-Roorkee

Dr. Kuldeep K. Saxena, Phagwara, Jalandhar

Dr. G.L. Samuel, IIT-Madras

Dr. P. A. Ramakrishna, IIT-Madras

Dr. A. Sameen, IIT-Madras

Dr. M. Deepu, IIST-Trivandrum

Dr.S. Sunil Kumar, LPSC, ISRO

Dr. P. V. Venkitakrishnan, IIT-Madras

Dr. T. John Tharakan, LPSC, ISRO

Dr. Subhash Chander, DGRE, DRDO

Dr. R. Santhanakrishnan, Master Tech. Pvt. Ltd., Karnataka

Dr. Srisha Rao M. V., IIScBangalore

Shri. R. Perumal Pillai, IPRC, ISRO, Tirunelveli

Dr. Bhalchandra Puranik, IIT-Bombay

Dr. T. Manikandan, Nehru Institute of Technology, Coimbatore

Dr. Rajat Gupta, NIT, Silchar

Dr. D.P.Sudhakar, SRE, IPRC, ISRO

Dr. V. Ashok, VSSC, ISRO