

Schedule of ICTACEM-2025, 15-17 Dec, 2025 at IIT Kharagpur

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|-------------|---------|---|--|--|----------|
| Venue | | Vikramshila Foyer | | | |
| | 8:00 | Registration | | | |
| | 8:00 | BREAKFAST | | | |
| Venue | | Kalidas Auditorium | | | Duration |
| 15 December | | Inauguration Of The Conference -- ICTACEM 2025 | | | |
| | 9:00 | Welcome Address By Convenor | | | 0:05 |
| | 9:05 | Address By Director, IIT Kharagpur | | | 0:15 |
| | 9:20 | Address By Chief Guest : Prof. Joseph Mathew | | | 0:15 |
| | 9:35 | Inaugural Talk : Turbulent Jets Prof. Joseph Mathew, Department of Aerospace Engineering, Indian Institute of Science Session Chair: Prof. Kalyan Prasad Sinhamahapatra | | | 0:45 |
| | 10:20 | Inaugural Talk : Digital Technologies in Aerospace Dr. Kallappa Pattada, Executive Director — Boeing Technology & Innovation and Chief Engineer — Boeing Defense India Session Chair: Prof. Kalyan Prasad Sinhamahapatra | | | 0:45 |
| | 11:05 | Tea Break | | | 0:25 |
| | Venue | Gargi Auditorium (A1) | Maitrayee Auditorium (S1) | Kalidas Auditorium (C1) | |
| | Session | Aerodynamics and Fluid Mechanics | Solid Mechanics and Dynamics | Flight Mechanics, Control and Navigation | |
| | | Session Chair Prof. Somnath Ghosh | Session Chair Prof. D K Maiti | Session Chair Prof. Alok Kanti Deb | |
| 15 December | 11:30 | A Scalar LPCE–ALE Framework for Sound Generation in Low-Mach Flows with Moving Boundaries : ICTACEM2025P813 Kevin S. Swamy; Vaibhav Joshi | 2D Multiphysics Modeling Framework for Laser Ablation of Al ₂ O ₃ Ceramic Coating : ICTACEM2025P987 Nazim Khan; Abinеш K; Rajdip Mukherji; Somnath Bhowmick; Pritam Chakraborty | A Lyapunov Guidance Vector Field with Variable Guidance Gain for Elliptical Path Following : ICTACEM2025P880 Ishan Phanse ; Sayantan Pal ; Sikha Hota | 0:15 |
| | 11:45 | Buckling load parameter analysis of Rectangular plate with Full and partial stiffeners under Uniaxial and Biaxial loading conditions : ICTACEM2025P709 prabhash kumar yadav ; Dr. AKL Srivastava | A Cohesive Zone Modelling approach for Fatigue Crack Growth and Life Prediction in Adhesively Bonded Joints: ICTACEM2025P601 Pradeep Kumar Sahoo; Mopidevi Naga Saradvani; Shrimukhi G Shastry | Altitude Control of Powered Parafoil Systems using Extended State Observer-Finite-time Sliding Mode Control (ESO-FTSMC) : ICTACEM2025P027 Nitin Pal ; Naba Kumar Peyada | 0:15 |
| | 12:00 | CFD Investigation of Transonic Bucket phenomena for Typical Grid Fin used on Re-Entry Stage Configuration : ICTACEM2025P856 Anubhab Das ; Kunal Garg ; Amit Sachdeva ; Ankur Nagpal | A comparative investigation of electromechanical vibration suppression in imperfect curved fiber laminates and straight fiber laminates with integrated piezoelectric layers: ICTACEM2025P031 Vanshika Anand; Ansh Kapoor; Narayan Sharma; Pawan Kumar; Prasant Kumar Swain | Comparative Analysis of Obstacle Avoidance Path Planning Algorithms for Robotic Manipulators: RRT, APF, and CHOMP : ICTACEM2025P898 Adeetya Uppal ; Rakesh Kumar Sahoo ; Manoranjan Sinha | 0:15 |
| | 12:15 | Computation of heat flux over Winged Reusable Launch Vehicle – Technology Demonstrator and comparison with flight data : ICTACEM2025P015 Sundeep Kumar Epuri ; Jiju R Justus ; Vidya G ; Manokaran K | A Meshfree Numerical Solver for a Fractional Calculus Approach to Continuum Damage Mechanics: ICTACEM2025P304 Malapeta Hemasundara rao; M Ramji; sai sidhardh | Curvature-Constrained UAV Path Following Using Finite-Time Sliding Mode Control : ICTACEM2025P056 Panasa Pranav Kumar ; Sayantan Pal ; Sikha Hota | 0:15 |
| | 12:30 | Design of Vent system for crew escape system-test vehicle compartments : ICTACEM2025P219 VenkatshivaramJadav B ; Jathaveda.M ; G. Vidya | A Reduced-order Homogenized Plate Model of Sandwich Structure Using Variational Asymptotic Method: ICTACEM2025P493 Anup Kumar Pathak; Pritam Chakraborty | Guidance Law for Surveillance by UAVs Using Curve Paths : ICTACEM2025P537 Gururaj Khurd ; Parth Madure | 0:15 |
| | 12:45 | Development and Validation of a Python-Based Preliminary Design Tool for Ramjet Engines : ICTACEM2025P683 Atharva Mangalkar ; Thivya Ranee ; Akshay Abhyankar | Analytical Investigation for Free Vibrations Analysis of Functionally Graded Sandwich Plates with Advanced Gradation Laws: ICTACEM2025P939 Ankitha Kamath; Supen Kumar Sah; Anup Ghosh | Lame Curve Following by UAVs using Vector Field Guidance : ICTACEM2025P744 Hemant V Nair ; Sayantan Pal ; Sikha Hota | 0:15 |
| | 13:00 | LUNCH BREAK | | | 1:00 |

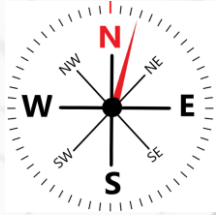
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|-------------|---------|--|---|--|------|
| 15 December | Venue | Kalidas Auditorium | | | |
| | 14:00 | Plenary Session -1: Vertical takeoff of aircrafts: Some new possibilities Prof. P. A. Ramakrishna, Department of Aerospace Engineering, IIT Madras Session Chair: Prof. Amardip Ghosh | | | 0:45 |
| | 14:45 | Plenary Session -2 : Wave Technologies in SHM of Built Facilities - Theory, Experiments and Practice Prof. Abhijit Mukherjee, School of Civil and Mechanical Engineering, Curtin University, Australia Session Chair: Prof. P K Datta | | | 0:45 |
| | Venue | Gargi Auditorium (P1) | Maitrayee Auditorium (S2) | Kalidas Auditorium (S3) | |
| | Session | Propulsion | Solid Mechanics and Dynamics | Solid Mechanics and Dynamics | |
| | | Session Chair Prof. Srinibas Karmakar | Session Chair Prof. Vikranth Racherla | Session Chair: Prof. Kiran Vijayan | |
| | 15:30 | Bluff Body Induced Regression Rate Enhancement in Hybrid Motor : ICTACEM2025P797 | The assessment to study the free vibration of edge cracked bi-directional SFGM plate with modified inverse hyperbolic shear deformation theory (m-IHSDT): ICTACEM2025P284 | Axially-Loaded Column under Earthquake Loading : ICTACEM2025P664 | 0:15 |
| | | Ankush Vilas Khnadare ; Aditya Sanjay Patil ; Jogi Binit Patel ; Sachin Chandrakant Sonage ; Nagendra Kumar ; Narendra Deore | Rahul Sudam Kamble; Achchhe Lal; Bhriugu Nath Singh | Mahendra Gattu | |
| | 15:45 | Correlation of Tulip Flame Formation and CH Chemiluminescence Bursts in Confined Propane-Air Combustion : ICTACEM2025P329 | ANN-based prediction of the deflection and free vibration characteristics of functionally graded plates for various boundary conditions: ICTACEM2025P996 | Comparative Ballistic Impact Simulation of NiTi SMA-Reinforced and Conventional GFRP Composites : ICTACEM2025P571 | 0:15 |
| | | Abhishek kumar : Ratan Joarder | Dabeer Anwer Danish; Sukanta Chakraborty | Sibaram Patro ; Prof. Chandra Sekher Yerramalli ; Prof. Krishnendu Haldar | |
| | 16:00 | Tea Break | | | 0:15 |
| | Venue | Gargi Auditorium (A2) | Maitrayee Auditorium (S4) | Kalidas Auditorium (C2) | |
| | Session | Aerodynamics and Fluid Mechanics | Solid Mechanics and Dynamics | Flight Mechanics, Control and Navigation | |
| | | Session Chair Prof. Chandan Bose | Session Chair: Dr. Ganesh Soni | Session Chair Prof. Suman Maiti | |
| 15 December | 16:15 | Direct Simulation Monte Carlo Study of Thruster Plume Impingement on Planetary Surface : ICTACEM2025P067 | Comparative bending response of imperfect variable-angle tow and straight fiber laminates with integrated PZT layers: ICTACEM2025P016 | Mobile Anti-Drone System: A SDR Approach for Defensive Disruption of UAVs : ICTACEM2025P630 | 0:15 |
| | | Malakannan G ; Suman Chakraborty | Ansh Kapoor; Vanshika Anand; Narayan Sharma; Pawan Kumar; Rakesha Chandra Dash | Ajit Kumar ; Namra Patel ; Jagat Rath | |
| | 16:30 | Effect of Flight velocity on Mean Flow of an Ideally Expanded Supersonic Jet – a CFD study : ICTACEM2025P990 | Deflection Characteristics of Piezoelectric Composite Plates under UDL and SSL Using Refined Second Shear Deformation Theory: ICTACEM2025P690 | Model-Less Feedback Control of Space-based Continuum Manipulators using Backbone Tension Optimization : ICTACEM2025P254 | 0:15 |
| | | Sanjoy Kumar Saha ; Manoj T Nair | Raju Sidhu Pawar; Achchhe Lal | Shrreya Rajneesh ; Nikita Pavle ; Rakesh Sahoo ; Manoranjan Sinha | |
| | 16:45 | On the Dynamic Mode Decomposition of Supersonic Cavity Flow : ICTACEM2025P439 | Deformation Behavior of Soft Electroelastic Membranes Subjected to Large Electric Fields: ICTACEM2025P886 | Wind-Aware Dubins-Inspired L1 Guidance for Faster Convergence with Bounded Continuous Curvature and Sliding Mode Tracking for UAVs : ICTACEM2025P678 | 0:15 |
| | | Satya Prakash ; Ram Kumar Yadav ; Avijit Chatterjee ; Aniruddha Sinha | Yadwinder Singh Joshan; Sushma Santapuri; Debashih Khan | Pradyumn Mahajan ; Sayantan Pal ; Sikha Hota | |
| | 17:00 | Effect of Pivot Point Location on the Propulsive Performance of Rear Airfoil in Tandem Configuration : ICTACEM2025P440 | Design and Development of a Hybrid Model for Impact Analysis on Underwater Vehicles: ICTACEM2025P600 | Obstacle Avoidance of UAV in Dynamic Environments Using Direction and Velocity-Adaptive Artificial Potential Field : ICTACEM2025P943 | 0:15 |
| | | Adeetya Uppal ; Rahul Ranjan ; Sunil Manohar Dash | Pankaj Meena; Rajiv Sharma | Nikita Vaibhav Pavle ; Shrreya Rajneesh ; Rakesh Kumar Sahoo ; Manoranjan Sinha | |
| | 17:15 | Effect of ply-orientation angle on flutter behaviour of laminated composite plates : ICTACEM2025P264 | Reliability analysis of uncertain vibration response in bidirectional sandwich structures using a direct probability integral approach : ICTACEM2025P735 | Parameter Estimation of BLDC Motor Using Nonlinear Least Square Method : ICTACEM2025P974 | 0:15 |
| | | Shashank K S ; Subrata Barman ; Rajeev Nayan Gupta ; Saikat Ranjan Maity ; Dipak Kumar Maity ; Sudip Dey | Narayan Sharma ; Pawan Kumar ; Prateek Chandrakar ; Dipak Kumar Maiti | Rajib Mandi ; N.K. Peyada | |
| | 17:30 | Tea Break | | | 0:20 |
| | 17:50 | Panel Discussion on : Opportunities and Challenges of AI implementation in Aerospace | | | |
| | 18:50 | | | | 1:00 |

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| | Venue | Vikramshila Foyer | | | |
| | 8:00 | BREAKFAST | | | |
| 16 December | Venue | Kalidas Auditorium | | | |
| | 9:00 | Plenary Session -3: SPC-I and DPSM – two new developments in the field of NDE and SHM Prof. Tribikram Kundu, Department of Civil and Architectural Engineering and Mechanics, University of Arizona, USA Session Chair: Prof. Arghya Deb | | | 0:45 |
| | 9:45 | Hijli Detention camp to IIT-An Untold Saga | | | 0:45 |
| | Venue | Gargi Auditorium (A3) | Maitrayee Auditorium (S5) | Kalidas Auditorium (C3) | |
| 16 December | Session | Aerodynamics and Fluid Mechanics | Solid Mechanics and Dynamics | Flight Mechanics, Control and Navigation | |
| | | Session Chair Prof. S M Dash | Session Chair Prof. Vikranth Racherla | Session Chair Prof. Sourav Patra | |
| | 10:30 | Empirical expression to predict the first-mode resonant frequency of a pitching flexible panel : ICTACEM2025P467 | Effect of Localized Elastic Supports Representing Ribs and Mounts on the Flutter Behavior of Tailored Composite Panels: ICTACEM2025P427 | Real-Time Obstacle Avoidance for Waypoint Following of UAVs : ICTACEM2025P146 | 0:15 |
| | | Abhinav Kumar KSN ; Parag Deshpande ; Ravi Dodamani | Abdul Sadiq; Aayush Gupta; Dipak Kumar Maiti | Heavenly Dadala ; Sayantan Pal ; Sikha Hota | |
| 16 December | 10:45 | Estimation of Flight Measured Pressure using CFD for a Typical Launch Vehicle : ICTACEM2025P287 | Effects of random orientation of bluff body on the onset speed of galloping-based piezoelectric energy harvester: ICTACEM2025P101 | Real-Time Tiny Object Detection and Tracking for High-Altitude UAVs Using Customized YOLO Architectures : ICTACEM2025P536 | 0:15 |
| | | Sreenivasulu Juluri ; Sanjoy Kumar Saha ; Vidya G | Rakesha Chandra Dash | Vishnubhatla Aditya Shankar ; Devshree Kumar | |
| | 11:00 | Feature-Alignment Model Order Reduction (FAMOR) for Nonlinear Convective and Shock-Dominated Flows : ICTACEM2025P358 | Evaluation of anisotropy via non-destructive indentation in LPBF processed Co-Cr-Mo alloy: The role of scanning strategy: ICTACEM2025P892 | Moving Target Interception using Variable L1 guidance : ICTACEM2025P519 | 0:15 |
| | | Aritro Ghosh ; Aniruddha Sinha ; Sanjay R. | Vinod Kumar Jat; R. U. Patil | Machavolu Venkata Sushanth ; Sayantan Pal ; Sikha Hota | |
| | 11:15 | Tea Break | | | 0:15 |
| | Venue | Gargi Auditorium (A4) | Maitrayee Auditorium (S6) | Kalidas Auditorium (B1) | |
| | Session | Aerodynamics and Fluid Mechanics | Solid Mechanics and Dynamics | Bio-Inspired FSI | |
| | | Session Chair Prof. K P Sinhamahapatra | Session Chair Prof. P K Datta | Session Chair: Prof. Sandeep Saha | |
| 16 December | 11:30 | Harnessing wind energy within the conduit-style tall building through the use of wind turbines : ICTACEM2025P104 | AI in Finite Element Analysis | Analysis of Temporal Oscillations of a Deflected Wake in a Plunging Foil Using Proper Orthogonal Decomposition : ICTACEM2025P007 | 0:15 |
| | | Amlan Kumar Bairagi | Ganesh Soni | Mohamed Aniffa S : Sunetra Sarkar | |
| | 11:45 | Impact of Preheated Central Jet on Intermixing of Confined Multi-Annular Swirling Jets : ICTACEM2025P035 | | Flow-Induced Vibrations of a Circular Cylinder and an Upstream D-Cylinder of various Elliptical Ratios : ICTACEM2025P036 | 0:15 |
| | | Ritesh Srivastava ; Vivek Kumar Patel | | Sachin S B ; Atul Sharma | |
| | 12:00 | Integrating CFD, Experiments, and Bayesian Inference for Aerodynamic Analysis of Serrated Delta Wings : ICTACEM2025P832 | Experimental Analysis of the Magneto-Viscous Responses of Magneto-Active Polymers: ICTACEM2025P419 | Response Dynamics of Bio-Inspired Morphing Aerofoils : ICTACEM2025P505 | 0:15 |
| | | Sarat Kumar Maharana ; Anand M Raikar ; N. Chikkanna | Rahul Kumar Saini | Chandan Bose ; Hibah Saddal ; Lucky Jayswal | |
| | 12:15 | Model Order Reduction for Cerebrovascular Hemodynamics: A POD-Galerkin and Hybrid Physics-Informed Approach : ICTACEM2025P717 | Experimental Fabrication and Characterization of E-Glass/Epoxy Composites Using Vacuum-Assisted Resin Infusion: ICTACEM2025P609 | Scaling laws for thrust generated from pitching foils : ICTACEM2025P492 | 0:15 |
| | | Rahul Halder ; Arash Hajisariifi ; Kabir Bakhshaei ; Gianluigi Rozza | UMAKANTA MEHER; MOHAMMED RABIUS SUNNY; Praveen Shakya; Iqbal Ahmed | Maresh K Sawardekar ; Ratnesh K Shukla | |
| | 12:30 | Numerical Analysis of Shockwave Boundary Layer Interaction : ICTACEM2025P616 | Experimental Static and Fatigue Damage Assessment of Adhesively Bonded CFRP Joints Under Mode II Loading Using AE Technique: ICTACEM2025P138 | Wake Modifications arising from a Bio-inspired Flexible Filament placed on NACA0012 Airfoil : ICTACEM2025P643 | 0:15 |
| | | Prahlad V Deshpande ; Suraj J Warang ; Dhruv Bagora ; Pardeep Duneria | Bandaru Bangararaju; Sai Sidhardh; M Ramji | Thangavel Sudeep ; Sachin Yashavant Shinde | |
| | 12:45 | Numerical Investigation of a Novel Aerospike–Aero disk–Bleed Channel Configuration for Drag and Thermal Load Reduction in Hypersonic Vehicles : ICTACEM2025P518 | FE Modeling of Single Foam-filled Reentrant Unit Cell to Evaluate Deformation Mechanics and Energy Absorption: ICTACEM2025P165 | Wave Propagation Mechanisms for Enhanced Jet Impulse in Squid-Inspired Flexible Nozzles : ICTACEM2025P096 | 0:15 |
| | | Sanjay Satish ; Vijay Suresh ; Aswathy K. S. ; A. Abhijith ; Antony J. K. ; Manoj Kumar M. | Viswasarathi N M; Bibhu Prasad Mahapatra; Prasun Jana | Paras Singh ; Daehyun Choi ; Halley Wallace ; Gourav Samal ; Saad Bhamla | |
| | 13:00 | LUNCH BREAK | | | 1:00 |

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| | Venue | Kalidas Auditorium | | | |
| 16 December | | Plenary Session -4: Role of Real Fluid Behaviour & Multi-Physics Optimisation in Sustainable Energy System Prof. Jayanta Kapat, Department of Mechanical & Aerospace Engineering, University of Central Florida, USA Session Chair: Prof. C S Mistry | | | 0:45 |
| | 14:00 | | | | |
| | 14:45 | Plenary Session -5: Designing Heavy Payload Unmanned Aerial Systems: The Helicopter Way Prof. Abhishek, Department of Aerospace Engineering, IIT Kanpur Session Chair: Prof. Sikha Hota | | | 0:45 |
| | Venue | Gargi Auditorium (A5) | Maitrayee Auditorium (S7) | | |
| | Session | Aerodynamics and Fluid Mechanics | Solid Mechanics and Dynamics | | |
| | | Session Chair: Prof. Akshay Prakash | Session Chair: Prof. M R Sunny | | |
| 16 December | 15:30 | Numerical Investigation of an Archimedean Spiral Wind Turbine Using Dynamic Mesh CFD in ANSYS Fluent : ICTACEM2025P217 | Finite Element Simulation of Magnetocaloric Effect in Gadolinium: ICTACEM2025P187 | | 0:15 |
| | | Shivendraraj Godbole ; Krishnendu Haldar | Busi Swathi priya | | |
| | 15:45 | NUMERICAL INVESTIGATION OF LOW-FREQUENCY OSCILLATIONS IN SEPARATED SHEAR FLOWS ; ICTACEM2025P194 | Flexural and ILSS Performance of GFRP Composites under Extreme Temperature Conditions: ICTACEM2025P970 | | 0:15 |
| | | Digpriya; Rajesh Ranjan ; Pradeep Moise | Suplal Tudu; Velmurugan Ramachandran | | |
| | 16:00 | Tea Break | | | 0:15 |
| | Venue | Gargi Auditorium (A6) | Maitrayee Auditorium (S8) | Lecture Hall V1 (S9) | |
| | Session | Aerodynamics and Fluid Mechanics | Solid Mechanics and Dynamics | Solid Mechanics and Dynamics | |
| | | Session Chair: Dr. Parag Deshpande | Session Chair: Prof. P K Datta | Session Chair: Prof. Korak Sarkar | |
| 16 December | 16:15 | Numerical Investigation on the Effect of Acoustic Cavity Geometry, Angle of Attack, and Injectant Molecular Weight for Drag and Heat Flux Reduction over a Blunt Body : ICTACEM2025P074 | Free Vibration Analysis of Cranked Sandwich Plates with CSCL Facesheets and Honeycomb Core Comparison: ICTACEM2025P654 | Machine Learning based approach to predict the life of damaged wind turbine blade : ICTACEM2025P622 | 0:15 |
| | | Sanjay Satish ; Arun B. S. ; Ashik Muhammad ; Manoj Kumar M. ; Antony J. K. | Gajavada Sanjeevkumar; Pritam Mondal; Jayant Prakash Varun; Prashanta kr Mahato | Praveen Shakya ; Umakant Meher : Sachin Kumar ; Danial Arias ; Abdenmour C. Seibi ; Mohammad A. S. Masoum | |
| | 16:30 | Numerical Prediction of Interaction Between Two Flying Robotic Butterflies : ICTACEM2025P288 | Investigation of Delamination Progression in Unidirectional Composite Laminates: ICTACEM2025P309 | Magneto-Stiffening Effects on Beam Vibrations Supported by Winkler Foundation : ICTACEM2025P296 | 0:15 |
| | | Aman Shukla ; Debajyoti Kumar ; Chandan Bose; Somnath Roy | Subhabrata Koley | Lakshita Patil | |
| | 16:45 | Numerical Study on Drag Reduction of Various Bluff-body Geometries using the Passive Rotation of a NACA0012 Aerofoil : ICTACEM2025P055 | Investigation of Flexural Behavior of Functionally Graded Plates through Higher-Order Shear Formulation: ICTACEM2025P045 | Micromechanical Homogenization and Electromagnetic Characterization of Radar Absorbing Materials using Multiphysics Simulation : ICTACEM2025P595 | 0:15 |
| | | Bibhas Chand ; Prabir Sikdar ; M S Harihara Sudhan ; Sunil Manohar Dash | Smruti Ranjan sahu; Surendra Verma; Bhrigu Nath Singh | Omkar Bilawar ; Krishnendu Haldar | |
| | 17:00 | Effect of Mach number on a Compressible Impinging Round Jet: An LES study : ICTACEM2025P072 | Investigation of transonic buffet loads on aeroelastic launch vehicle model using coupled CSD-CFD approach: ICTACEM2025P273 | Microstretch Continuum Theory Modeling for Nematic Liquid Crystalline Elastomers: Interplay Between Non-Affinity and Director Stretch : ICTACEM2025P192 | 0:15 |
| | | Priyakshi Goswami ; Somnath Ghosh | Amit Kumar Onkar; Mutturaj H Medar; Arun Kumar A; Rahul B Choudhary; Shivaprasad M V; Raja S | Aishwarya Kasarla ; Prof. Krishnendu Haldar | |
| | 17:15 | Predictive Multiphysics Simulation of Fluid-Structure Interaction in Deformable Microchannels for Biomedical Applications : ICTACEM2025P232 | Large deformation analysis of magneto-active polymer membranes under varying mechanical loads: ICTACEM2025P064 | Semi-analytical estimates for three phase elastomeric self-healing composite systems : ICTACEM2025P815 | 0:15 |
| | | Satyabrata Podder ; Tapan Sarkar ; Amit Dhar ; Animesh Das ; Shantanu Dutta | Anuttar Jain; Krishnendu Haldar | Jayram Desai ; Vikranth Racherla | |
| | 17:30 | Tea Break | | | 0:30 |
| | 18:00 | Cultural Evening at Kalidas Auditorium followed by Conference Dinner at Vikramshila Foyer | | | |

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|-------------|---------|--|---|---|------|
| 17 December | Venue | Department of Aerospace Engineering | | | |
| | 8:00 | BREAKFAST | | | |
| | Venue | Seminar Room of Aerospace Engineering Annex Building | | | |
| | 9:00 | Plenary Session -6: Modelling and Simulation of Multiphase Flows: A Personal Perspective Prof. J C Mandal, Department of Aerospace Engineering, IIT Bombay Session Chair: Prof. Somnath Ghosh | | | 0:45 |
| | Venue | Seminar Room of Aero Annex Building (A7) | Meeting Room Aero Annex Building (S10) | Seminar Room Aero Old Building (S11) | |
| | Session | Aerodynamics and Fluid Mechanics | Solid Mechanics and Dynamics | Solid Mechanics and Dynamics | |
| | | Session Chair: Prof. Ranadev Datta | Session Chair: Prof. Amit Shaw | Session Chair: Prof. Mainak Chakraborty | |
| 17 December | 9:45 | Prediction of Store Trajectory Using Domain-Decomposed Reduced-Order Modelling : ICTACEM2025P722 | Parametric study of friction characteristics of IRS rail steel using ball-on-disk experiments: ICTACEM2025P726 | Dynamic Response of Variable Fibre Spacing Composites Under Porous Hemispherical Nosed Impactor: ICTACEM2025P969 | 0:15 |
| | | Navdeep Pandey ; aysinh Jagdishchandra Patel ; Aniruddha Sinha | Shreedhar Sahoo; D S Kushan; Mayank Kumar; Vikranth Racherla | Aayush gupta; Abdul Sadiq; Dipak Kumar Maiti | |
| | 10:00 | On the evolution of Lamb vector in pulsating transonic jet flows : ICTACEM2025P040 | Random Eigenvalue Characterization for Free Vibration of Centrifugally Loaded Euler-Bernoulli Beams: ICTACEM2025P599 | Role of Particle Shape in Fabric Evolution during Compressive Creep Failure of Concrete : ICTACEM2025P303 | 0:15 |
| | | Subhro Halder ; Debayan Das ; Ribhu Pal ; Satvik Jaiswal ; Arnab Roy | Jammu Sarathi; Ravi Prakash Prajapati; Korak Sarkar | Subham Mukherjee ; Kumar Anjneya ; Arghya Deb | |
| | 10:15 | Shock-Tandem Bubble Interaction: The Effect of Inter-Bubble Gap on the Bubble Flow Dynamics : ICTACEM2025P549 | RBFN-based reliability analysis of thermally loaded variable fiber spacing composite plates with damage: ICTACEM2025P184 | Morphological Effects of Friction Modifiers for Railway Applications: Binder vs Solid Lubricant : ICTACEM2025P568 | 0:15 |
| | | Nithin Krishnan S ; Ribhu Pal ; Arnab Roy ; Parthasarathi Ghosh | Prateek Chandrakar; Narayan Sharma; Dipak Kumar Maiti | Kushan D S ; G S P J Ronith ; Shreedhar Sahoo ; Mayank Kumar ; Vikranth Racherla | |
| | 10:30 | Some Acoustic Measurements on a Thrust-Vectoring Biconical Jet : ICTACEM2025P504 | Simulation of Voltage Generation in Thermophotovoltaic (TPV) Cells Using FE Analysis: ICTACEM2025P992 | Thermo-elastic vibration characteristics of graphene-reinforced composite stiffened spherical panels : ICTACEM2025P751 | 0:15 |
| | | Saiphanendra Karuchola ; Deeksha Yadav ; Revathy R K ; Arun Kumar Perumal Ashoke De | Samanth Martis; Krishnendu Haldar | Pabitra Maji ; Poonam Kumari ; Bhriugu Nath Singh | |
| | 10:45 | Stability characteristics of ORV at Transonic and Supersonic Mach number : ICTACEM2025P161 | Strength and Environmental Durability of Epoxy/Graphene Oxide Composites:An AI-Driven Framework for UAV Applications: ICTACEM2025P166 | Thermo-Mechanical Analysis of thermally Autofrettaged Functionally Graded Disk : ICTACEM2025P949 | 0:15 |
| | | Nalin Singh Sirohi ; M Jathaveda ; Dileep K N ; G Vidya | Santosh Maharana; SK Maharana; R. Vijayakumar | Mohit Rajput ; .M. Kamal ; R.U. Patil | |
| | 11:00 | Thrust Vectoring of an Actively Controlled Supersonic Jet : ICTACEM2025P312 | Study of lamb wave propagation for sandwich plates of fiber-reinforced functionally graded transverse isotropic material with an adhesive modelled as linear elastic material with voids using frobenious method: ICTACEM2025P694 | Transonic flutter prediction of delta wings using coupled CSD-CFD approach : ICTACEM2025P760 | 0:15 |
| | | Mayank Kumar ; Saiphanendra Karuchola ; Arun Kumar Perumal ; Ashoke De | Rokkam Saketh; Tatipaka Anand | Arun Kumar A ; Amit K Onkar ; Rahul B Choudhary ; Arun K ; Raja S | |
| | 11:15 | Tea Break | | | 0:15 |
| | Venue | Seminar Room of Aero Annex Building (A8) | Meeting Room Aero Annex Building (S12) | Seminar Room Aero Old Building (S13) | |
| | Session | Aerodynamics and Fluid Mechanics | Solid Mechanics and Dynamics | Solid Mechanics and Dynamics | |
| | | Session Chair: Prof. Mrinal Kaushik | Session Chair: Prof. Prasun Jana | Session Chair: Prof. M R Sunny | |
| 17 December | 11:30 | Venting analysis of a Typical Launch Vehicle Inter Stage Structure near to strapon nose cone : ICTACEM2025P605 | Temperature-Driven Deformation Mechanisms in CNT- and Graphene-Reinforced Al _{0.5} CoCrFeNi High-Entropy Alloys: A Molecular Dynamics Approach: ICTACEM2025P827 | Vibration-Based Energy Harvesting Using Mass-in-Mass Metamaterial with Piezoelectric Coupling : ICTACEM2025P307 | 0:15 |
| | | Darshit Gajera ; Sanjoy Kumar Saha | Subrata Barman; Sudip Dey | Subrata Barman ; Pushpa Pandey ; Hamed Haddad Khodaparast ; Tanmoy Mukhopadhyay ; Hadi Madinei ; Michael Friswell | |
| | 11:45 | Computational Investigation of Aerodisk Geometries in a Spiked Blunt Body for Hypersonic Heat Reduction : ICTACEM2025P875 | Analytical Modelling of Electro-Mechanical Impedance (EMI) in Adhesively Bonded Beams for Multi-Damage Detection: ICTACEM2025P019 | XFEM based Free vibration analysis of thin Circular plates using 2DOF on Multiple crack characteristics : ICTACEM2025P653 | 0:15 |
| | | Sanjay Satish ; Satheeshkumar S. ; Nivin Francis | Umakanta Meher; Mohammed Rabius Sunny | Babasaheb Kisan Varpe ; Achchhe Lal | |
| | 12:00 | Validating Combined Vector Field Approach With Full Quadrotor Dynamics ; ICTACEM2025P514 | Tailoring Flow-Induced Vibrations of Flexible Plates via Perforation: ICTACEM2025P108 | Aerodynamic Performance of a Multi-Element Flapping Foil Inspired from the Feathered Wings of Birds : ICTACEM2025P761 | 0:15 |
| | | Dheeraj ; Sikha Hota | Shubham Giri; V. Kartik; Amit Agrawal; Rajneesh Bhardwaj | Avinash Kumar Pandey ; Rajneesh Bhardwaj ; Rajat Mittal | |
| | 12:15 | Poster Presentation Sessions Will Take Place at the End of Oral Presentations. | | | |
| | Venue | Seminar Room of Aerospace Engineering Annex Building | | | |
| | 12:30 | Valedictory Session of ICTACEM 2025 | | | 0:30 |
| | 13:00 | LUNCH BREAK | | | |

ICTACEM-2025



A
BRH Hall

B
Zakhir H. hall

C
Tech. Guest House
(TGH)

IIT Kharagpur Main gate

Towards Venue

D
Day 1,2 Venue
Vikramshila Complex

E
Day 3 Venue
Aerospace Dept.

Route Map

ICTACEM-2025

BUS PICK UP TIMINGS

| ICTACEM Venue | BRH hall (A) | Zakhir H. Hall (B) | Technology Guest House (C) |
|---------------|--------------|--------------------|----------------------------|
| 7:35 | 07:45 | 07:50 | 07:55 |
| 8:20 | 08:30 | 08:35 | 08:40 |
| 10:40 | 10:50 | 10:55 | 11:00 |
| 12:35 | 12:45 | 12:50 | 12:55 |
| 15:35 | 15:45 | 15:50 | 15:55 |
| 17:05 | 17:15 | 17:20 | 17:25 |
| 19:00 | 19:15 | 19:20 | 19:25 |

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DEC

ICTACEM-2025

BUS PICK UP TIMINGS

| ICTACEM Venue | BRH hall (A) | Zakhir H. Hall (B) | Technology Guest House (C) |
|---------------|--------------|--------------------|----------------------------|
| 7:35 | 07:45 | 07:50 | 07:55 |
| 8:20 | 08:30 | 08:35 | 08:40 |
| 10:50 | 11:00 | 11:05 | 11:10 |
| 12:35 | 12:45 | 12:50 | 12:55 |
| 15:35 | 15:45 | 15:50 | 15:55 |
| 17:05 | 17:15 | 17:20 | 17:25 |
| 21:30 | 21:35 | 21:40 | 21:45 |
| 22:00 | 22:10 | 22:15 | 22:20 |

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DEC

ICTACEM-2025

BUS PICK UP TIMINGS

| ICTACEM Venue | BRH hall (A) | Zakhir H. Hall (B) | Technology Guest House (C) |
|---------------|--------------|--------------------|----------------------------|
| 7:35 | 07:45 | 07:50 | 07:55 |
| 8:20 | 08:30 | 08:35 | 08:40 |
| 10:50 | 11:00 | 11:05 | 11:10 |
| 12:35 | 12:45 | 12:50 | 12:55 |
| 14:30 | 14:35 | 14:40 | 14:45 |

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DEC