



## 20th December, Forenoon (9 AM - 12.30 PM)

Session 5: **Machine Learning /AI Techniques in Heat and Fluid Flow**

Session Chair: **Prof. Balaji Srinivasan (IIT Madras)**

Zoom Link: <https://us02web.zoom.us/j/89040799553?pwd=RVoyWVVF3WUdGemRZZ1dMdDxkdDV2UT09>

Note: Only Session Chair and Presenting Author of the listed papers should join using Zoom Link. Other Registrants should join as audience through conference web portal.

Paper No	Author(s)	Title	Affiliation	Time
129	Rajat Chourasia, D. Sathyanarayanan, Abhijit Avinash Adoni, Debasis Chakraborty and S V. Bindagi	Physics Informed Neural Network: Application to spacecraft thermal modelling	Thermal Systems Group, U. R. Rao Satellite Centre, Dept. of Space, Govt. of India, Bengaluru	10.15 - 10.30 AM
131	Tonmoy Sharma, Vijay Kumar, Kumar Nishant Ranjan Sinha and Rishi Raj	Deep Learning Time-Frequency Representations of Boiling Acoustics for Accurate Prediction of Transition between Heat Transfer Regimes	Indian Institute of Technology Patna	10.30 - 10.45 AM
183	Neeraj Kavan Chakshu, Hamid Tamaddon and Perumal Nithiarasu	Deep Neural Network for solving forward and inverse problems in heat transfer	Swansea University	10.45 - 11.00 AM
205	Sushrut Ranade and Chakravarthy Balaji	Thermal parameter estimation in a two-dimensional irregular heat conducting body using the Bayesian approach	Indian Institute of Technology Madras	11 - 11.15 AM
226	Suraj Kumar and Balaji Chakravarthy	Sequential prediction of thermal conductivity, heat capacity and thermal diffusivity using Bayesian inference in high vacuum	Indian Institute of Technology Madras	11.15 - 11.30 AM
231	Tonmoy Sharma, Vijay Kumar, Kumar Nishant Ranjan Sinha and Rishi Raj	Physics Informed Deep Learning for Acoustic Detection of Departure from Nucleate Boiling	Indian Institute of Technology Patna	11.30 - 11.45 AM
255	Deepa Gupta, Probir Saha and Somnath Roy	Surrogate Modeling for Prediction of Thermal Performance of Perforated micro-pin Fins using Artificial Neural Network	Indian Institute of Technology Kharagpur	11.45 - 12.00 PM
512	Sufia Khatoon, Supreet Singh Bahga and Jyoti Phirani	Estimation of flux in a disc brake system using accelerated Bayesian inference	Indian Institute of Technology Delhi	12.00 - 12.15 PM
<p style="text-align: center;"><b>Keynote Talk 19: Prof. Van P Carey (UC Berkeley, USA)</b>  <b>Title: Machine Learning as a Tool to Explore and Model the Thermophysics of Heat Transfer with Phase Change</b></p>				<b>9 – 9.45 AM</b>

Note: All times are Indian Standard Time (IST)