Day 1: 9/12/2020

Inaugural Function

8:30-9:00 AM	Hall 1

Plenary Session

9:00-9:45 AM	Hall 1

Prof. Subir Kar Plenary Lecture by Prof. Gautam Biswas, IIT Kanpur

Session Chair : Prof. Atul Sharma, IIT Bombay

Title: Dynamics of drop coalescence and entrapment of large bubble

Keynote Lectures

10:00-10:30 AM	Hall 3

Dr. L. Venkatakrishnan, NAL Bangalore

Session Chair : Prof. Ganesh Natarajan, IITPKD

Title: On the Phase Averaged Momentum of Fluidic Oscillators.

10:00-10:30 AM	Hall 4

Prof. Lin Chen, Institute of Engineering Thermophysics, China

Session Chair : Prof. Pallab Sinha Mahapatra, IIT Madras

Title: Multi-Scale Thermohydrodynamics and Measurement Techniques in Supercritical Fluid Systems.

Parallel Session 1

10:30-12:30 PM	Session 1A Hall 1

Instability, Transition & Turbulence (8)

Session Chair : Prof. K Arul Prakash, IIT Madras

Paper Id	Author(s)	Title
30	Deepak K. Singh, Rahul Prajapati, Arjun Sharma	Detached-Eddy Simulations of Flow Past a NACA0012 Airfoil
34	Arshan Khan, P. Bera	Bifurcation perspective of pressure-driven flow in a heated vertical annulus: role of Prandtl number and gap between cylinders
48	Aditya Kumar, Deepak Kumar, Sudhakar Subudhi	Thermal instability in the open cavity turbulent natural convection
56	Sachin D. Kanhurkar, P. S. Gandhi, Amitabh Bhattacharya	Stability of Viscous Fingering in Multiport Lifted Hele Shaw Cell
60	Neeraj Gupta, Koushik Das, Biplab Kumar Debnath	Heat Transfer Enhancement using Modified Vortex Generator
63	Uddip Kashyap, Sandip K. Saha	Study of vortex stretching behind a vortex generator with secondary surface over the primary rectangular surface
94	Parth Pandya, Ramesh Bhoraniya, Ravi Kant	The Effect of the Forebody Shapes on the Stability of the Axisymmetric Boundary Layer
100	Vishwa Mohan Behera and Sushil Kumar Rathore	Computational Analysis of Turbulent Flow Behaviour of Offset Jet Flowing over a Moving Plate using Low–Re Turbulence Mode

10:30-12:30 PM	Session 1B Hall 2

Computational Fluid and Gas Dynamics (8)

Session Chair : Prof. Sandip Sarkar, Jadavpur University

11	Milan K. Mondal, Aparesh Datta, Nirmalendu Biswas, Nirmal K. Manna	MHD mixed convective heat transfer in a partially heated partially driven cavity filled with Cu-water nanofluid saturated porous media
15	U. K. Sarkar, Nirmalendu Biswas	Natural Convection in a Semi-circular Enclosure
16	Sujit Kumar, Sushil Kumar Rathore	Computational Study of Flow and Heat Transfer Characteristic of Oblique Laminar Slot Jet impingement on isothermally heated moving flat plate

18	Ansh Patel, Saiyam Nahata, Pritesh Kabra, Mandar Tendolkar	Performance Enhancement Analysis of Diffuser Augmented Wind Turbine Duct
19	M. S. Jaswanth, S. Abishek, Amruth Kesav, T. Praveen, Raushan Kumar	A New Efficient Flux-limited Hybrid Scheme for the 1D Euler Equations
23	Vinod Kumar Saini, Hardik Kothadia	Fin Effectiveness and Efficiency of Air-Cooled Condenser – A Numerical Approach
24	Siva K. Bathina, Sudheer Siddapureddy	Numerical Assessments of Thermal Radiation from Large Kerosene Open Pool Fires
25	Frranc Steeve, Anil Kumar Sharma, Joseph Daniel	Interaction effects of radiation and turbulent natural convection in enclosures with discrete source and sink

10:30-12:30 PM   **Session 1C Hall 3**

Microfluidics (8)		
Session Chair :	Prof. Partha Sarathi Guha Pattadar, IIT Guwahati	
10	Abhilash K. Tilak, Ranjit S. Patil	Two-phase numerical study on the effects of hybrid nanofluid on the performance of microchannel heat sink
14	Prajwal Athreya R, Tejas J, Venson Mascarenhas, Srikanth N.S	Numerical Investigation of Single-Phase Heat Transfer in Converging and Diverging Microchannel
22	Shamik Hazra, Sushanta K. Mitra, Ashis Kumar Sen	Viscoelastic Droplet Dynamics in Viscoelastic matrix
35	Gaikwad Bhushan Sunil, Anurag Agarwal, Pratyaksh Karan, Jeevanjyoti Chakraborty, Suman Chakraborty	Deformation behaviour of viscoelastic microchannel with axially graded wall softness
89	Shamik Hazra, Sushanta K. Mitra and Ashis Kumar Sen	Particle Migration in Shear Thinning Viscoelastic Fluid
125	Santosh Kumar Jena1, Tushar Srivastava, Sasidhar Kondaraju	Experimental analysis of droplet generation in T-junction microchannel
142	Vaibhav Jaiswal, P. S. Gandhi	Paper-based Microfluidic Pump for Point-of-Care Applications
157	G. N. Sashi Kumar, N. K. Maheshwari, A. K. Kalburgi	Multi-objective Optimization of micro-channel for improved mixing characteristics

10:30-12:30 PM   **Session 1D Hall 4**

Multiphase Flows (8)		
Session Chair :	Prof. Pranab K Mondal, IIT Guwahati	
20	Bikash Pattanayak, Hardik Kothadia	Comparative Experimental Study of Critical Heat Flux on Geometrically Different Heaters during Pool Boiling
21	Harsh Deswal, Hardik Kothadia	Effect of sub-atmospheric pressure on flow boiling heat transfer coefficient in a helically coiled steam generator
27	Abhijith. M. S., K. Venkatasubbaiah	Eulerian-Eulerian two-phase modeling of double jet impingement flows with nanofluid in a mini-channel
32	Aniket D Monde, Amman Jakhar, Prodyut R Chakraborty	Effect of shrinkage during thermo-solutal convection for a unidirectional solidification of binary alloys
38	Nalinikanta Behera, Suman Chakraborty	Transient electrohydrodynamics of drop in extensional flow
40	Abhishek Singh, Parmod Kumar	Dynamics of the Drop Impact Phenomenon onto a Deep Liquid Pool with Initial Axisymmetric Wavy Interface
49	Vishnu Viswanath, Jophy Peter, Deepak K Agarwal, T. John Tharakan, S. Sunil Kumar, Manu K Vasudevan, Prathap C	Direct Contact Condensation of Subsonic, Inversely Buoyant Steam Jet in a Stagnant Pool of Water
53	Palaniappan Venkatachalam, Srikrishna Sahu, Kameswararao Anupindi	Numerical investigation on the role of a mixer on spray impingement and mixing in channel air flow

Keynote Lectures	
1:30-2:00 PM	**Hall 1**
Prof. Yosuke Hasegawa, The University of Tokyo, Japan	
Session Chair: Prof. K Arul Prakash, IIT Madras	
Title: Optimal control of wall turbulence for dissimilar heat and momentum transport.	
1:30-2:00 PM	**Hall 2**
Prof. A-B Wang, National Taiwan University, Taiwan	
Session Chair: Prof. Ramjee Repaka, IIT Ropar	
Title:One-step-further research from the basic fluid mechanics to its modern biomedical applications.	

Parallel Session 2		
2:00-4:00 PM		**Session 2A Hall 1**
Propulsion & Power (8)		
Session Chair : Prof. Chetan Mistry, IIT Kharagpur		
5	Nishit Bedi	Utilization of Hydrogen-CNG Blends in a port injected Spark Ignition Engine
37	Kiran U K, Sumesh V	Experimental Investigation on Strut Injectors in Supersonic Mixing
68	Prince Charles, Vagesh D. Narasimhamurthy	Numerical study of a planar turbulent jet from a pintle-shaped orifice
77	Kesava Vishnu G1, Midhun R, Assiz M P, Jinesh K, Chokalingam Prathap	Investigation of Laser Ignition System (LIS) using Hydrogen, Methane and Propane Combustible mixtures
85	Anant Singhal, Deepak K. Agarwal, T. John Tharakan, S. Sunil Kumar	Two-phase CFD Analysis of Water Injection in Cryogenic Engine Nozzle during Ground Test
96	Sonu Kumar, Raj Sekhar, Swetaprovo Chaudhuri, and Saptarshi Basu	Impact of Air-Split Ratio Over Mean and Dynamic Characteristic of Spray Flow Field in Gas Turbine Swirl Injector
141	Ghanshyam Bharatea, Arun kumar R	Starting Transients in Second Throat Ejector Diffuser
144	Amit Kumar Yadav, Varghese Mathew Thannickal, Assiz M.P., T. John Tharakan	Spray characterisation of Isrosene loaded with nanoparticles using a shear coaxial injector

2:00-4:00 PM		**Session 2B Hall 2**
Computational Fluid and Gas Dynamics (8)		
Session Chair : Prof. Sukumar Pati, NIT Silchar		
195	Subhra Sankar Kalita, Anoop Kumar Dass	Multiple Stable Solutions for Two-Sided Lid-Driven Cavity using Multigrid-Accelerated Streamfunction-Velocity Formulation
58	Hemanth Chandra Vamsi K, Nagabushana Rao Vadlamani	A high-order differential equation based unsteady wall distance solver
65	Yadaba Mahanand, Jnana Ranjan Senapati	Numerical investigation of transverse inverted-T sectioned rib roughened SAH
69	Vikram Shukla, Sunil Ganju, Bhuvaneshwar Gera, Salil Varma, Samiran Sengupra, Sujay Bhattachayra, N K Maheshwari	CFD Evaluation of Inlet Gas Conditions Effect on Passive Catalytic Recombiner Device Efficiency
73	Arnab Mukherjee and Jnana Ranjan Senapati	The effect of surface radiation and conduction of funnels on IRS device
80	Kshitij Ghormode and Avishek Ranjan	Numerical Study of Electromagnetic Braking of the Molten Steel Flow in a Continuous Caster
84	Aritra Roy Choudhury, Priyesh Kakka, Kameswararao Anupind	Evaluation of Turbulence Models for an Offset Planar Wall Jet with Heat Transfer
86	Muddada Srinivasrao, Pruthiviraj Nemalipuri, Harish Chandra Das, Vivek Vitankar, Malay Kumar Pradhan,	Prediction of pool fire flame characteristics using numerical simulation

2:00-4:00 PM		Session 2C Hall 3
Aerodynamics (8)		
Session Chair :		Prof. Sukanta Roy, Curtin University
28	Veeresh Tekure, K. Venkatasubbaiah	Effect of back-pressure ratio on the shock train structures in the isolator of SCRAMJET inlet at different Mach numbers
31	Nikhil Bharadwaj M N, Rahul Ronel, Rajendra Prasad	Parametric Analysis using Computational Fluid Dynamics of a Formula Student Racecar
43	Nishab Ali, Vaibhav Sharma, Andallib Tariq	Flow Investigation of U-Turn in an Internal Serpentine Passage by Using Stereo PIV
44	Zaid Paloba, Vishnu A.S, Gagana. C	Numerical Investigation of Heating and Cooling Effect to the Cavity and Pylon Exposed to Supersonic Flow
62	Lavala Srinivasa Rao, P. Mondal and S. Das	Experimental investigation on Shock Cell Characteristics of sonic/supersonic Jets
70	Ashish Pawar, Sandip Sarkar, Sandip Saha	Flow stability over blunt headed cylinder at an angle of incidence through dynamic mode decomposition
104	Vivek Kumar P, Narendra Kumar, and S Thanigaiarasu	Experimental Investigation on Co-flowing Chevron and Truncated-chevron nozzles
108	Ravindra A. Shirsath and Rinku Mukherjee	Computational Investigations of Aerodynamic Properties for Flow Past NACA 0012 3D Wing in Ground Proximity

2:00-4:00 PM		Session 2D Hall 4
Multiphase Flows (8)		
Session Chair :		Prof. Binita Pathak, IIT (BHU) Varanasi
66	Nandhakumar P, Srikrishna Sahu	Droplet clusters and voids characterization in a twin-fluid injector using Voronoi analysis
71	Harish Chandra, P. Bera	Free convection in an anisotropic porous cavity due to non-uniform heat flux at bottom wall
75	Mahasidha R. Birajdar, C. M. Sewatkar	Experimental Analysis of Pump Driven Closed Loop Thermosyphon System for the Cooling of Electronics Devices
78	Arvind Kumar, Hardik Kothadia	Comparison of Boiling Heat Transfer Coefficient at Different Orientations for Circular Tube
81	Deepak Kumar Singh, Gaurav Bhutani	Numerical solution of the bivariate population balance equation in a finite element framework
95	Anuj Kumar, Rohit Kothari, Pawankumar Singh, Rushikesh Vaidya, Santosh K. Sahu and Shailesh I. Kundalwal	Thermal Performance Enhancement of PCM Based Cross Plate Finned Heat Sink for Electronic Cooling
98	Saroj K. Panda, Vishnu Anand P. and Rajeev R.	Sedimentation of Solid-Liquid Suspension in a Batch Settler: Numerical Simulations and Measurements
111	Sounak Majumder, Rajdeep Sardar, Arpan Sow, Achintya Mukhopadhyay, Swarnendu Sen and Ashoke De	Analysis of a Computationally Efficient Heat Transfer Model for Single-Component Droplet Evaporation

Parallel Session 3		
4:15-5:30 PM		Session 3A Hall 1
Fund. Issues & Persp in FM (5)		
Session Chair :		Prof. Biplab Debnath, NIT Meghalaya
4	Dip Mukherjee, Bikash Sahoo	The combined effects of Navier slip and stretch on the oscillating behaviour of the Bödewadt flow
55	Praveenkumara B M, Dr. B Sadashive Gowda, Bhanuprakash M J, Rajesh Kumbara S K	Experimental Study of Increasing the Overall Heat Transfer Coefficient and Heat Transfer Rate of Double Pipe Heat Exchanger by V-Threaded Pipe
59	Faizan U. Khan, M.V. Panchagnula, K. Velusamy	Effects of Free Surface Parameters on Gas Entrainment in Cold Pool of SFRs
83	Mathew Saxon A, Aneesh Rajan, and Sajeev P	Experimental Study on the Effect of Cross Flow on Discharge Coefficient of an Orifice

219	Sthavishtha R. Bhopalam, D. Arumuga Perumal, and Ajay Kumar Yadav	Fluid flow in three-dimensional oscillating lid-driven cavities

4:15-5:30 PM   **Session 3B Hall 2**

Comp. Fl. Gas Dy. (5)

Session Chair : Prof. Amit Dhiman, IIT Roorkee

87	Birju Yagnik, Ramesh Bhoraniya	Effect of forebody shapes on the hydrodynamic characteristics of the axisymmetric boundary layer
88	U. S. Rajput and K. M. Singh	A modified alternative weighted essentially non-oscillatory scheme for inviscid compressible flow
92	Anoop B, Mangarjuna Rao P	Simulation of Sodium Vapour Transport in Cover Gas Volume of Reactor Vessels
97	Paghdar Dhavalkumar, Ninish S. and C Suresh Kumar	Thermal Analysis of High Pressure Helium Gas Tank System during Venting
99	K.N.V. Adinarayana, P. Mangarjuna Rao and Seik Mansoor Ali	Numerical Model forEvaluation of Single-Phase Natural Circulation Loop Transients

4:15-5:30 PM   **Session 3C Hall 3**

Measurement Tech. in FM (3) + FSI (2)

Session Chair : Prof. Sushanta Dutta, IIT Roorkee

54	Mitanjali, Vaibhav Arghode	Development of PIV System with Angular Scanning based, Dual Color Illumination
76	Manish Sharma, Tanmoy Bose, Biplab Kumar Debnath	Detection of Bubble Embedded in Water using Double Frequency Method
138	Abdul Rahiman P.M, Kumar K, Farande K.U, Sahu T.K, Jyothi Prakash A, Ajai S, Swain T.K	Comparative Evaluation of Typical Submersible Pumps
6	Jyoti Gupta, Arun K. Saha	Jet Shear Layer Study of Round Elevated Jet in Crossflow at Low Velocity Ratio
45	Atendra Kumar, Rajendra K. Ray	Study of unsteady flow separation for shear flow past an array of two square cylinders

4:15-5:30 PM   **Session 3D Hall 4**

Misc (5)

Session Chair : Prof. Balkrishna Mehta, IIT Bhilai

7	Alex Y, Jobie Earnest	Production, Engine Performance and Emission Characteristics of Nanoparticles added Bio-diesel Obtained by Orange Peel Oil Methyl Ester Blended with Conventional Diesel Fuel
9	Gaurav Dogra, Amitabh Bhattacharya, Anupam Dewan, Sandeep Sahany	Study of Cloud formation over Sea Surface using Large Eddy Simulation
29	Piyush Bhoyar, Suraj Ghiwe, Vilas Kalamkar, Milind Kshrisagar	Experimental Investigation of the Effect of Insulation Materials on the Performance of Hybrid Draft Biomass Cookstove
42	Jaswant Singh, Nur Alom, Bikash Kumar Sarkar	Computational Assessment of Cross Flow Hydro Turbine by Changing the Rotational Speed
46	Varun Hassija, Suneet Singh	Analysis of Pressure Transients due to various types of Valve Chattering

Day 2: 10/12/2020

Keynote Lectures

9:00-9:30 AM	Hall 1

Prof. S. Balachandar, University of Florida, USA

Session Chair: Prof. Kirti C Sahu, IIT Hyderabad

Title: Host-to-Host Airborne Contagion As a Multiphase Flow Problem For Science-Based Social Distance Guidelines.

9:00-9:30 AM	Hall 2

Prof. Partha P Mukherjee, Purdue University, USA

Session Chair: Prof. Ashoke De, IIT Kanpur

Title: Flow and Transport Stochastics in Energy Conversion and Storage.

Parallel Session 4

9:30-11:30 AM	Session 4A Hall 1

Instability, Transition & Turbulence (8)

Session Chair : Prof. Sandip Kumar Saha, IIT Bombay

Paper Id	Author(s)	Title
110	Vivek K. Mishra, Saroj K. Panda, Biswanath Sen, M.P. Maiya and B.P.C. Rao	Effect of Duct Location and Shape of Enclosure on Forced Convection Heat Transfer from Fuel Subassemblies to Air in a Nuclear Fuel Storage Vault
121	Mukesh Sharma and Arnab Kr. De	Role of multi-scale roughness in sustaining the enhanced heat transport regime for Rayleigh-Benard convection
172	Harish Varma, Karthikeyan Jagadeesan, Vagesh D. Narasimhamurthy, Amit P. Kesarkar	LES and DNS of symmetrically roughened turbulent channel flows
174	Parag Chaware, C M Sewatkar	Laminar to Chaotic Transitions for Flow Through a Pipe with Twisted Tape Insert
175	Uddipta Singha, Prasanna S. Gandhi	Fingering Instability with Sphere-on-Flat geometry in a Lifted Hele-Shaw Cell
182	Alok Kumar, Suneet Singh	Stability Analysis of Pressure-drop Oscillations in Two-phase Flow System
183	Narsing K. Jha, Victor Steinberg	Elastic instability in straight channel with viscoelastic fluid flow
199	Venugopal T. Vishnu, Arnab K. De and Pankaj K. Mishra	Mean-wind and its characteristics in turbulent Rayleigh-Benard convection in a cubic cell

9:30-11:30 AM	Session 4B Hall 2

Computational Fluid and Gas Dynamics (8)

Session Chair : Prof. Jyotirmay Banerjee, SVNIT Surat

101	Deepak Kumar, Aditya Kumar, Sudhakar Subudhi	MHD free convection of magnetite nanofluid in cooling of an electronic component
103	Ch. Narendra Kumar and K.P.Sinhamahapatra	The Effects of Spacing to Diameter Ratio on Mixing Characteristics of Twin Jets
105	Abhishek Kumar Singh, Krishna Mohan Singh	GMRES Solver for Interpolating MLPG Method Applied to Two-Dimensional Heat Conduction Problem
126	Sagar G Nayak, Sangamesh Prabhu Suligavi, and Jyotirmay Banerjee	Numerical Analysis of Electrowetting Induced Droplet Detachment from Hydrophobic Surfaces
128	Bismaya Ranjan Behera, Jnana Ranjan Senapati	Natural convection heat transfer in a vertical open cylindrical cavity
129	A.K. Baranwal	Free Convection from Two Cylinders of Different Diameters in a Square Duct
135	Rahul Kumar, Siva K Bathina, Sudheer Siddapureddy	Fire and Evacuation Simulation of Kumbakonam School Fire Accident
147	Sourabh Jogee, Kameswararao Anupindi, and B.V.S.S.S. Prasad	Large-eddy Simulation of Flow Over Three Side By Side Circular Cylinders

9:30-11:30 AM   **Session 4C Hall 3**

Microfluidics (8)		
Session Chair : Prof. Bahni Ray, IIT Delhi		
170	Tushar Srivastava, Santosh Kumar Jena, Sasidhar Kondaraju	Droplet impact near milli-meter sized channel
171	Dungali Sreehari, and Yogesh K. Prajapati	Numerical Simulation of Heat Transfer and Pressure Drop in Two Different Configurations of Pin Fin Microchannel Heat Sink
191	Arani Mukhopadhyay, Partha Sarathi Dutta, Amitava Datta, and Ranjan Ganguly	Liquid droplet morphology on the fiber of a fog harvester mesh and the droplet detachment conditions under gravity
207	Satyabrata Podder, Susobhan Misra, Arunabha Chanda	Analysis of Magnetohydrodynamic Slip Flow of Non Newtonian Fluids through Circular Microchannels
227	Tara Chand Kumar Maurya and Sushanta Dutta	Numerical Simulation of Two Immiscible Liquids Flow in T-microchannel using Level-Set-method
246	Bhaskarjyoti Sarma, Dipankar N. Basu, and Amaresh Dalal	Transient dynamics of liquid jets during droplet impingement on superhydrophobic surface
264	Pranab Kumar Mondal	Effect of Ribbed Structures on the Mixing Characteristics in a Microfluidic Channel
265	P. Kaushik and Pranab Kumar Mondal	Analytical framework for a slightly elastic Maxwell fluid squeezed and extruded between two infinite parallel plates

9:30-11:30 AM   **Session 4D Hall 4**

Multiphase Flows (8)		
Session Chair : Prof. Arup Kumar Das, IIT Roorkee		
143	Harsh Kulkarni, Prashant Sharma, Avinash J. Gaikwad, L. R. Bishnoi	Development of a Choked Mass Flow Model
112	Rajdeep Sardar, Sounak Majumder, Arpan Sow, Swarnendu Sen, Achintya Mukhopadhyay, and Ashoke De	Analysis of Multicomponent Gas Phase Diffusion Models in the Context of Droplet Evaporation
120	Ritesh Prakash, Bongliba T Sangtam, Santosh Deb Barma, Kalicharan	Bubble size analysis in a Two-phase Counter-current flow in the 2-D column
150	Rahul Kumar Mondal, Sharey Deep Guleria and Parmod Kumar	Free Surface Vortex and Associated Air Entrainment at the Intake of a Centrifugal Pump
151	Rajasekar. K, Raja. B	Investigation of the flow pattern of spray from solid cone nozzle
155	Debarshi Debnath and Parmod Kumar	Revealing the Anomalies associated with Droplet Spreading Dynamics
156	Rahul Jha, Nirav Chaudhari, and Dr. Jyotirmay Banerjee	Numerical Analysis of Aeration Mechanism in Plunging Liquid Jet
164	Jayanta Sutradhar, Rohit Kothari, Anuj Kumar, and Santosh K. Sahu	Study of solidification process of PCM with shrinkage void effect in an annulus

Plenary Session

11:45-12:30 PM	**Hall 1**
Prof. Aswatha Narayana Plenary Lecture by Prof. h.c. Franz Durst, FMP TECHNOLOGY GMBH, Erlangen, Germany	
Session Chair : Prof. Prabal Talukdar, IIT Delhi	
Title: Solutions of Some Unsolved Problems of Fluid Mechanics.	

Keynote Lectures

1:30-2:00 PM	**Hall 3**
Prof. A M Pradeep, IIT Bombay	
Session Chair: Prof. Himanshu Tyagi, IIT Ropar	
Title: Understanding Instabilities in Axial Flow Compressors.	

1:30-2:00 PM	Hall 4

Prof. Saptarshi Basu, IISc Bangalore
Session Chair: Prof. Pranab K Mondal, IIT Guwahati
Title: Droplet and Aerosols in Context of CoViD-19.

Parallel Session 5

2:00-4:00 PM	Session 5A Hall 1

Fluid-structure interaction (8)	
Session Chair : Prof. Ganesh Natrajan, IIT Palakkad	
47	Gaurav Sharma, Rajneesh Bhardwaj	Bi-Stable Flow Induced Vibration Characteristics of a D-Section
91	Sambit Kumar Biswal, Prashant Kumar and Shaligram Tiwari	Effects of blockage and mass ratios on vortex induced vibration of a square cylinder
106	Parasuram I V L N, Anubhav Sinha	Investigating Wake Structures in Flow Past Configurations of Cylinders Using Proper Orthogonal Decomposition
107	Jijo Derick Abraham, Valeti Chanikya, Rishabh Jaiswal, and Trushar B Gohil	Fluid-Structure Interaction (FSI) analysis of flow-through three-dimensional hyperelastic flexible tube using OpenFOAM
137	Eswaran M, Sajish S.D, and Jalaldeen S	Fluid-Structure Interaction Analysis for BDBE and Wind Loads Estimation for Liquid Effluent Tanks of Nuclear Power Plant
146	Vivek Kumar Kushwaha, and Arnab Kr. De	Numerical study of dynamics of freely falling rectangular plates
228	Abdul Rahiman P M, Ghule S J, Jyothi Prakash A, Farande K U	Transient Analysis of a Long Rising Main of a Lift Irrigation Scheme
240	Akash Bhunia, Sunil Manohar Dash	A numerical study on the drag reduction of a circular cylinder at low Reynolds number with two contra-rotating control cylinders

2:00-4:00 PM	Session 5B Hall 2

Computational Fluid and Gas Dynamics (8)	
Session Chair : Prof. Pitambar Randive, NIT Silchar	
149	Chinu Routa and Akhilesh Kumar Sahu	Numerical Study on Thin-film Flow of Shear-thinning Fluids over a Horizontal Cylinder
152	Ashley Melvin and Janani Srree Murallidharan	Numerical Analysis of Plasma Extraction in a Backward facing Step Microchannel using OpenFOAM
158	Sangram Kumar Samal, and Manoj Kumar Moharana	Numerical Investigation on Thermo-Hydraulic Performance of Water-Al2O3 Nanofluid in Recharging and Simple Microchannels: A Comparative Study
161	Kapil Kumar, Shobhana Singh	A CFD Investigation of Turbulent Mixing in Horizontal T-joint
163	Shubhanshu Rai, Shobhana Singh	Numerical Investigation of Natural Convection in an Enclosure with Bottom heating
165	Nidhi Singh and Manish K. Khandelwal	tability of Mixed Convection Flow in a Differentially Heated Vertical Channel under Transverse Magnetic Field with Internal Heat Sources
166	Dr. K. Srinivasan, Dr. P. Vasundhra	Optimal shape design of circular-to-square transition duct using CFD
167	Ravibala Patil, Dr.C.M.Sewatkar	Thermal Lattice Boltzmann Method based Forced Convection Heat Transfer from Six Inline Heated Square Cylinders for Various Spacing Ratios

2:00-4:00 PM	Session 5C Hall 3

Turbomachinery (8)	
Session Chair : Prof. A M Pradeep, IIT Bombay	
12	Vighneshkumar R	Investigation of high cycle fatigue failure risk of small geometry turbine housing using Fourier analysis methods

26	Sadham Usean .R, B.V.S.S.S Prasad, Milind Dhabade, Subrata Nayak, Ramkumar .P	Flow Visualization and Measurements in a Lube-Test Rig for an Air Turbine Starter
39	Parag Rajpara, Rupesh Shah, Jyotirmay Banerjee	Improvement in Combustion and Emission Characteristics of methane Fuelled Upward Swirl Can Combustor with Hydrogen Enrichment
52	Devesh Singh, Ruchi Khare	Effect of Casing Geometry on Performance of Centrifugal Pump
61	Ashima Malhotra, Shraman Goswami, Pradeep A.M.	Effect of Surface Roughness Levels on Axial Compressor Rotor Performance
64	Nishab Ali, Vaibhav Sharma, Andallib Tariq	Flow Investigation at U – Turn With and Without Matrix in a Two Pass Rectangular Duct by Using Stereo PIV
113	Sandeep Kumar, Subodh Khullar and Bhupendra K Gandhi	Shear Layer and Vortex identification of Rotating Vortex Rope Structure Obtained via Proper Orthogonal Decomposition
114	Rajavamsi Gangipamula, Shyam N. Shukla, Ravindra S. Birajda	Transient Behaviour of a Pump Intake and its Impact on Pump Life

2:00-4:00 PM   **Session 5D Hall 4**

	Multiphase Flows (8)	
	Session Chair :	Prof. Gaurav Tomar, IISc Bangalore
173	Arun Shaw, Sourav Sarkar, and Achintya Mukhopadhyay	Experimental and Numerical Investigation of Water Jet in Air Crossflow
177	Sachin Zanje, Kannan Iyer, Janani Srree Murallidharan, Hemant Punekar, and Vinay Kumar Gupta	Development of One dimensional model for Bubble Collapse
180	Sai Kiran Asapu, Ankit Pandey, Aniruddha Choudhary, Srikrishna Sahu and Vagesh D. Narasimhamurthy	Two Phase Flow Simulation of Primary Liquid Breakup in Coaxial Jets
184	Koteswara Rao Kandukuri, Phanindra Jampana	Optimal Design of Plunging Jet Velocity Profile For Higher Gas Holdup
193	Akash Bhunia, Varanasi Sai Subhankar, Amit Kumar, and Sandeep Saha	Shear Deformation of Ferro-Fluid Droplet under uniform Magnetic Field in a Hele-Shaw Cell
197	Govind Sharma and Bahni Ray	Quantitative and Qualitative Assessment of Circular and Square Particle Sedimentation
201	Sharey Deep Guleria, Parmod Kumar	Influence of Water Pool Temperatures on the Direct Contact Condensation: A Numerical Study
209	Prateek Grover, Yuvraj Singh Malhi and R. N. Ponnalagu	A Comparative Study on Industrial Multiphase Flow Measurement Techniques

Parallel Session 6

4:15-6:00 PM   **Session 6A Hall 1**

	Propulsion & Power (6)	
	Session Chair :	Prof. Neeraj Kumbhakarna, IIT Bombay
145	Amit Kumar Yadav, Varghese Mathew Thannickal, Assiz MP, T. John Tharakan	Effect of nanoparticles on combustion performance of Isrosene sprays
153	Dhanalakshmi Sellan, Raju Murugan, Saravanan Balusamy	Investigation of LPG Stratified Turbulent Flame using Simultaneous OH*/CH* Chemiluminescence
159	Libin Abraham, Sharmistha Choubey, Justin Jose	Numerical simulation of liquid jet breakup
176	Sumit Shankar Sarvankar, Adrin Issai Arasu and Nagabhushana Rao Vadlamani	Effect of Crosswind Flow on Intake Aerodynamics
230	Ganesh R Gawale, G. Naga Srinivasulu	Impact of Biodiesel Blend (B20) as a Fuel Substitute for Diesel on Methanol Dual Fuel HCCI Engine Performance

4:15-6:00 PM   **Session 6B Hall 2**

	Comp. Fl. Gas Dy. (6)	
	Session Chair :	Prof. Paragmani Kalita, Tezpur University

181	Anand Bharadwaj S, and Nikhil Das	Numerical Investigation of the Effects of Varying Membrane Permeability on Concentration Polarization in Membrane Separation
188	Snehasis Chowdhury, Tanmoy Mondal, and Prince Raj Lawrence Raj	Assessment of Various RANS Based Turbulence Models for Predicting Near Wall Flow and Heat Transfer Quantities for a Turbulent Slot Jet Impingement
192	Vipul Kumar Gupta, Pradeep Kumar Jha, Pramod Kumar Jain	Effect of Submerged Entry Nozzle Port Angle on Fluid Flow and Solidification of Continuous Casting Bloom
194	Tilekar N, Atrey M, and Gandhi P	Parametric Investigation of Liquid-cooled Fractal-like Heat Sink
33	Vikrant Chandrakar, Jnana Ranjan Senapati	Computational study of natural convection with surface radiation from a vertical solid cylinder using various radiation models
196	Kalyan Deepak. G, Sujan B Thapa, Raja Mangalagiri, and Satya P Jammy	Performance of various shock capturing schemes on CPU's and GPU's

4:15-6:00 PM **Session 6C Hall 3**

Turbomachinery (7)		
Session Chair : Prof. Abdus Samad, IIT Madras		
109	Subodh Khullar, Sandeep Kumar, Rahul Goyal, Krishna M. Singh, Michel J. Cervantes, and B. K. Gandhi	Comparison of Turbulence Models for Predicting the Flow Field in the Draft Tube of a High-Head Francis Turbine at Part Load Operation
115	Rajavamsi Gangipamula, Pritanshu Ranjan, and Ranjit S Patil	Hydraulic Noise Reduction in a Volute Pump Using Source Modification - A Test Data Correlation and Numerical Simulation Approach
118	M. Ananth Pai , N. G. Rasu , R. Manoharan , L. S. Ismail , V. Krishnaprasad , A.N. Patra	Mathematical Modelling of Fuel Transfer Pump for Combat Aircraft Fuel System Applications
127	Dhrumil Ganatra, Ranjit Jovin Cyriac, M. Rajendrakumar and K. Natesan	Transient RANS Solution Approach for Predicting Rotordynamic Coefficients of Seals
136	Maitreyee Saini, Abhishek Kaimal.m, Pranav J, Shravan Kumar	Performance improvement of Darrieus hydrokinetic turbine through design modifications
162	K. Kumar, Atul S. Tumane, R.A. Kubde, Abhijeet Kulkarni, B.M Shinde and S.G Sutar	Cannibalisation of Kaplan Turbine Runner Blades – A Case Study
178	Maya M. Kurulekar, K. Kumar, Shardul Joshi and Abhijeet Kulkarni	A pilot study on retrieving energy potentials during minimum discharge through irrigation dependent hydro power plants

4:15-6:00 PM **Session 6D Hall 4**

Aerodynamics (5)		
Session Chair : Prof. Alakesh Chandra Mondal, IIT Kanpur		
134	Ninad Patil, Alok Kumar, S. K. Sinha and Arvind Deshpande	Dynamic Wind Load Analysis on Heliostat
185	C Dinesh Prabhu, Ganapati Joshi, Ajay Misra, and Amogh Kulkarni	Numerical Analysis of Wave Drag Reduction in Cascade Fins by Altering Leading Edge Shape
190	Akshay Joshi, Amogh Kulkarni1, Ganapati Joshi	Experimental study of leading edge tubercles on Propeller performance
220	Vasanth Kumar G, Aritras Roy, Rinku Mukherjee	Tip Vortices over Wing Surface using Oil Flow Visualization
236	Ashutosh Saraswat, Lakhvinder Singh, S N Singh	Design of Mixing Tube to Improve Thermal Characteristics of an Ejector

General Body Meeting of NSFMFP

6:00-7:00 PM **Hall 1**

Day 3: 11/12/2020

Keynote Lectures

9:00-9:30 AM	Hall 1

Prof. Srinath Ekkad, North Carolina State University, USA

Session Chair: Prof. Rishi Raj, IIT Patna

Title: Heat Transfer Studies for Gas Turbine Hot Gas Path Components.

9:00-9:30 AM	Hall 2

Prof. Arup Kumar Das, IIT Roorkee

Session Chair: Prof. Bahni Ray, IIT Delhi

Title: Use of microfluidics for assessment of physical exhaustion level.

Parallel Session 7

9:30-10:45 AM	Session 7A Hall 1

Misc (5)

Session Chair : Prof. Santosh K Sahu, IIT Indore

Paper Id	Author(s)	Title
67	Niranjan S. Ghaisas, Bharadwaz Bollu, Nishanth Dongari	Regularized Geometry-Based Models for Power Prediction of Wind Farms
93	Samridhi Sharma, Chockalingam Prathap	Modelling & Optimization of non-contact type Liquid Desiccant Dehumidifier
102	Shashikant Das, Sudhakar Subudhi	Study of thermoregulation of the human body using the steady-state energy balance model
116	Anurag Samantara, K. Natesan	Assessment of Cable Fire in a Reactor Building under the Influence of Sodium Fire
123	Harsh Kulkarni, Prashant Sharma, Avinash J. Gaikwad, L. R. Bishnoi	Development of a Critical Heat Flux (CHF) Model

9:30-10:45 AM	Session 7B Hall 2

Comp. Fl. and Gas Dynamics (5)

Session Chair : Prof. Hrishikesh Gadgil, IITB

198	Raja Mangalagiri, Suchet B Thapa, Satya P Jammy	OpenSBLIFVM: An automatic code generation framework for Finite volume methods on CPU's and GPU's
202	Prashant Kumar, Sambit Kumar Biswal, Shaligram Tiwari	Effect of Side Blockage on Unsteady Wake Characteristics in Flow Past Surface Mounted Circular Cylinder
208	Akash C. Chandekar, Shivam Sharma, Sushant Kumar, and Biplab K. Debnath	Computational Analysis of Intake Manifold for Different BioCNG Substitutions in Dual Fuel Diesel Engine
212	Chandan Mukherjee, Sudipto Mukhopadhyay	Numerical investigation of laminar natural convection for a heated semicircular cylinder enclosed in a cylinder
215	Neeraj Kr. Singh, and Gaurav Bhutani	An Adaptive-Mesh Open-Source Finite-Element Framework for the Solution of Power-law Non-Newtonian Fluid Flows

9:30-10:45 AM	Session 7C Hall 3

Misc (5)

Session Chair : Prof. Himanshu Tyagi, IITRopar

179	Geleta Fekadu, Sajesh M, Kalpan singh and Sudhakar Subudhi	Experimental study of Internally Cooled Liquid Desiccant Dehumidifier Assisted by Solar Regenerated
189	Jaykumar Joshi, Pushpanjay K. Singh, Santosh K. Sahu	Experimental Investigation of Elliptical Nozzle on the Concave Surface with a Various Aspect Ratio
200	Shesh N. Dhurandhar, Ankit Bansal	Simulation of Hypersonic Flow Over the Martian Entry Vehicle Using Direct Simulation Monte Carlo/ Quantum-Kinetics Method
204	Akriti Masoom and Ankit Bansal	Impact of Covid-19 lockdown on the Aerosol levels in India and Solar Irradiance Forecasting using Weather Research and Forecast model and Satellite Remote Sensing
205	Anshuman Verma, Preeti Suri, Swati A Patel	On creeping flow of a yield stress fluid past a square cylinder in a channel

9:30-10:45 AM			**Session 7D Hall 4**
		Multiphase Flows (5)	
	Session Chair :	Prof. Suman Ghosh, NITRKL	
214	Naman Agarwal, Gaurav Bhutani	LES modeling of volcanic ash particles-settling in water using an adaptive-mesh finite element method	
225	Nilojendu Banerjee, Satyanarayanan Seshadri	Dynamics of Thin Film over Flat Rough Surface Moving with a Specified Velocity	
229	Sachin Tom, P. Mangarjuna Rao, B. Venkatraman, S. Raghupathy	Numerical simulation of flow boiling in a vertical annulus channel under near atmospheric pressure conditions	
244	Aritra Mukherjee, Dipankar N. Basu and Pranab K. Mondal	Numerical Investigation of the Effect of Surface Topology on Droplet Condensation following Lattice Boltzmann Methods	
250	Mohd Kashan, Anoop K. Dass, Manmohan Pandey and Shahnawaz Ahmed	A comparative study of spurious currents for cubic equation of state for E4, E6 and E8 order of isotropy and contact angle measurement using Pseudopotential LBM	

	Parallel Session 8		
11:00-12:30 PM			**Session 8A Hall 1**
		Misc (6)	
	Session Chair :	Prof. P. Muthukumar, IIT Guwahati	
133	Amit Kumar, Ravi Kumar, Subudhi Sudhakar	Numerical Investigation of Forced-air Pre-cooling of Apples	
139	Vikas Dwivedi, and Balaji Srinivasan	Numerical Experiments to Solve Partial Differential Equations with a Denoising Autoencoder	
148	Inderpal Singh, Parmod Kumar and Atul Dhar	Design of an ORC Based System for Waste Heat Recovery of Engines: A Theoretical Approach	
154	Ankush Chandrakant Bhandarkar, Parag Jyoti Bezbaruah, Bikash Kumar Sarkar, Rajat Subhra Das	Solar air heater system control for space heating application in Shillong	
168	Mr. Divyesh Variya, Dr. Janani Srree Murallidharan	Numerical study on various techniques of obtaining negative pressure room using OpenFOAM	
261	Abir Chakravorty, Aditya Bandopadhyay	Fluid mass exchange improvement because of T-intersection altered with an air-damper	

11:00-12:30 PM			**Session 8B Hall 2**
		Comp. Fl. and Gas Dy. (5)+Misc(1)	
	Session Chair :	Prof. Vinayak Kulkarni, IIT Guwahati	
218	Ankan Dutta, Sourav Sarkar	Estimation of Pressure from Velocity Fields around a Two Dimensional NACA 4412 Airfoil using Artificial Neural Networks	
223	Arghyanir Giri and Sandeep Saha	Stall Suppression using Constant and Pulsatile Mass flux Jet Blowing on NACA 0015 Airfoil	
226	Amit Kumar Choudhary, Divesh Bharti, Gaurav Bhutani	Continuum modeling of snow avalanche dynamics using multiphase non-Newtonian fluid mechanics	
231	Amit Arora, PMV Subbarao	Three dimensional numerical investigations of longitudinal vortex generators for wake management in plain finned tube arrays	
235	Ritesh Kumar, B Tiwary, Pawan Singh, Raushan Kumar	Investigation of Heat Transfer Enhancement in Air-cooled Novel Wavy Geometry	
211	Harpreet Kaur Aasi and Manish Mishra	Impact of Axial Dispersion and Longitudinal Heat Conduction on Transient Response of Cryogenic Cross-Flow Three-Fluid Plate-Fin Heat Exchanger with Temperature Nonuniformity	

11:00-12:30 PM			**Session 8C Hall 3**
		Misc (6)	
	Session Chair :	Prof. Dibakar Rakshit, IIT Delhi	
232	S. Muthu Saravanan, P. Mangarjuna Rao, S. Raghupathy	Numerical investigation of sodium spills spreading on the floor surface under non-isothermal conditions of pool fire scenario	

237	Amit Arora, PMV Subbarao	Effect of longitudinal translation of toe-out type vortex generators on wake modifications in finned tube heat exchangers
242	Harsh Arora, Ranjeet Jha and Pradeep Kumar	foilNET: A Convolution based Neural Network for Prediction of Pressure Field around Oscillating Airfoils
247	Ravi Beniwal, Kapil Garg, Sarit K. Das and Himanshu Tyagi	Humidification-Dehumidification Desalination: Study of a Packed-Bed Humidifier
254	P. Magarjuna Rao, S. Muthu Saravanan and S. Raghupahy	Analysis of Sodium Pool Fire Scenario in Mutually Connected Cells by Developing Suitable Models
255	Nitesh Kumar , Dipankar Narayan Basu	Computational Analysis of Thermalhydraulics of Supercritical CO2 in Horizontal Finned Square Microchannel Heat-sink

11:00-12:30 PM		**Session 8D Hall 4**
Multiphase Flows (4) + Misc (2)		
Session Chair : Prof. Bahni Ray, IIT Delhi		
252	Maheshbhai Vanajara, Ravi Kumar, and Anil Kumar	Experimental Investigation of Adiabatic Straight Capillary Tubes for Mass Flow Rate for Partially Condensed R-32
257	Kiran Saikia, Dipankar N. Basu, Manmohan Pandey	A Simulation Study on the Effect of Different Heating Modes on Two-Phase Flow Instability of Natural Circulation Boiling System
262	Abhishek Singh, August Dubey, Manabendra Pathak	Heat Transfer Characteristics of a Modified Closed-loop Two-phase Thermosyphon System
263	Alok Kumar, Binayak Pattanayak, Abinash Mahapatro and Pinakeswar Mahanta	Effect of mass-flow rate on bed hydrodynamics of a bubbling fluidized bed unit
256	Tanuj Srivastava, Dipankar Narayan Basu	Fluid-to-fluid scaling of supercritical natural circulation loop under steady-state condition
259	Vismay V. Kulkarni, Vishal Bhalla, Kapil Garg and Himanshu Tyagi	Experimental Study of a Nanofluid-based Solar Thermal System for District Heating Applications

Keynote Lectures
1:30-2:00 PM   **Hall 3**
Prof. Ganesh Natarajan, IIT Palakkad
Session Chair: Prof. Somnath Roy, IIT Kharagpur
Title: Towards an Unified Framework for Gradient Schemes in Unstructured Finite Volume Solvers.
1:30-2:00 PM   **Hall 4**
Prof. Ashis Kumar Sen, IIT Madras
Session Chair: Prof. Rajneesh Bhardwaj, IIT Bombay
Title: Nature-inspired capillary flows.

Parallel Session 9		
2:00-3:45 PM		**Session 9A Hall 1**
Instability, Transition & Turbulence (6)		
Session Chair : Prof. Dipankar Bandyopadhyay, IIT Guwahati		
206	Pushpanjay K. Singh, Ayush Shah, Shubhendu N. Tripathi, Santosh K. Sahu, Prabhat K. Upadhyay	Experimental and Numerical Analysis of 2D Synthetic Jet with Different Waveforms
217	Ganesh N, Ananth S.M, Vadlamani N.R, Sriram R and Kontis K	Eddy Resolving Simulations of Shear Layer Instabilities in Open cavity flows
224	Pushpanjay K. Singh, Ayush Shah, Shubhendu N. Tripathi, Santosh K. Sahu, Prabhat K. Upadhyay	A Numerical Investigation on the Flow and Thermal Behaviour of a Single cavity Multiple Orifice Synthetic Jet
233	Krishan Chand , Mukesh Sharma, Arnab Kr. De	Effect of random roughness on heat flux in turbulent Rayleigh-Benard convection
269	Abhiroop Bhadra and Pankaj K. Mishra	Energy spectrum and energy budget of superfluid turbulence using two fluid shell model
270	Arjun J. Kaithakkal, Yukinori Kametani and Yosuke Hasegawa	Mechanism of dissimilar heat transfer enhancement in a laminar channel flow subjected to wall blowing and suction

2:00-3:45 PM		**Session 9B Hall 2**
	Computational Fluid and Gas Dynamics (6)	
	Session Chair : Prof. Ganesh Natarajan, IIT Palakkad	
239	Akhil Akkapelli, Gaurav Bhutani	Numerical modelling of free-surface flows using shallow water equations in a finite element framework
248	Hardik Chauhan, K Arul Prakash	Effects of bypass openings on fluid flow and heat transfer characteristics in the cooling plate design of a PEMFC
249	Sambit Majumdar, Arnab Ghosh, Dipankar N. Basu, and Ganesh Natarajan	Computational Assessment of Immersed Boundary-Lattice Boltzmann Method for Complex Moving Boundary Problems
251	Nilesh Kumar Jha, Allen George, Anshul Singh and K.Arul Prakash	Numerical Studies on Fluid Flow and Heat Transfer Characteristics of Solid Propellant Fuel in a Vertical Planetary Mixer
253	Kiran Panchal , Himadri Chattopadhyay	Modeling Bubble growth due to Boiling over a Surface using Lattice Boltzmann method
271	Neeraj M P, Ranjith Maniyeri, and Sangmo Kang	Numerical Study on Inertial Migration of Single Rigid Neutrally Buoyant Cylindrical Particle in Shear Flow Using Feedback Forcing Based Immersed Boundary Method

2:00-3:45 PM		**Session 9C Hall 3**
	Aerodynamics (6)	
	Session Chair : Prof. Arnab K. De, IIT Guwahati	
238	Shuvayan Brahmachary, Jubajyoti Chutia, Ganesh Natarajan, Vinayak Kulkarni, Niranjan Sahoo	Parametric investigation towards the design of a scramjet intake using low-fidelity approach
243	Rutvik S. Solanki, Vamsi K. Chalamalla and Sawan S. Sinha	Numerical simulations of flow past a three-blade vertical-axis wind-turbine (VAWT) using the actuator surface method
258	Avik Arora, Sudip Das, Priyank Kumar	Flow Field Investigation on BWB Aircraft at Different Angles of Attack
260	Ashish J. ChaudharI, Saurabh Rai, Vivek Sant, Akanshu Shah, Abhishek Shah, Vinay D. Patel	Experimental Evaluation of Vortex Tube Type Jet Wind Turbine Performance
266	Shuvayan Brahmachary, Chihiro fujio, Mehmet Aksay and Hideaki Ogawa	Design Optimisation and off-Design Performance Study of an Axisymmetric Scramjet Intake for Ascent Flight
267	Ajay Vijay Patil, Vinayak Kulkarni	Surface heat flux analysis for opposing jet and combination techniques in the presence of real gas effect

2:00-3:45 PM		**Session 9D Hall 4**
	Bio-inspired Fluid Mechanics (7)	
	Session Chair : Prof. Rajneesh Bhardwaj, IIT Bombay	
51	Sarvesh Shukla, Atul Sharma, Amit Agrawal, Rajneesh Bhardwaj	A computational study for propulsive performance analysis of travelling wave on the surface of a foil
72	Mettu Sagar, Sanjeev Soni, Sarit K. Das, Himanshu Tyagi	Numerical Study of Nanoparticle Injection in Tumors for Nanoparticle-assisted Hyperthermia
90	Abdulrajak Buradi, Arun Mahalingam, Madhusudhan A, and Avinash L	Computational Analysis of Pulsatile Blood Flow Through an Idealized Axisymmetric Stenosed Coronary Artery
117	Sidharth Sankar Das, Anil Kumar Verma, and Swarup Kumar Mahapatra	Thermal analysis of blood flow in a bifurcated structure with different plasma viscosity using multiphase approach
122	Md Shahzad Hasan	Lattice Boltzmann modeling of cardiovascular flow in a microchannel
130	Vikas Sharma, Sushanta Dutta	Experimental Methodology for Shear Stress Analysis of a Bio-Inspired Riblet Surface
245	Niraj Kr Prasad, Rajib Shome, Gautam Biswas, Siddhartha Sankar Ghosh and Amaresh Dalal	Transport behaviour of commercial anti-cancer drug protein-bound paclitaxel (Nanopacli) in blood capillary sized microchannel

Valedictory Function
4:00-4:30 PM	**Hall 1**