ME@75: Research frontiers conference Schedule (June 29th – July 1st, 2022)

Time		June 29th (Registration starts at 8:00 AM)				June 30th				July 1st			
Start	Stop												
9:00	9:30	**Inauguration**				**9:00 – 9:15:** Instron				Start ME-up Panel Discussion Panelists: Prof. Santosh Ansumali (Sankhyasutra), CS Murali (SID), Vijay K (Ajax Engineering), Speaker from (Bellatrix), Prof. B. Gurumoorthy (IISc)			
9:30	10:00	Invited talk (Prof. Imraan Faruque, OSU, USA)				Invited talk (Prof. Ahmed E Elbanna, UIUC, USA)							
10:00	10:30	Invited talk (Prof. Nagamani Jaya Balila, IITB, India)				Invited talk (Prof. Anurag Gupta, IITK, India)							
10:30	11:00	Coffee/Tea (Oral Session 1 Speakers need to upload their PPT files)				Coffee/Tea (Oral Session 2 Speakers need to upload their PPT files)				Coffee/Tea (Oral Session 3 Speakers need to upload their PPT files)			
11:00	12:30	Oral Session 1 (Main Hall)	Oral Session 1 (Hall A)	Oral Session 1 (Hall B)	Oral Session 1 (Hall C)	Oral Session 2 (Main Hall)	Oral Session 2 (Hall A)	Oral Session 2 (Hall B)	Oral Session 2 (Hall C)	Oral Session 3 (Main Hall)	Oral Session 3 (Hall A)	Oral Session 3 (Hall B)	Oral Session 3 (Hall C)
12:30	1:00	**12:30 – 12:45:** COMSOL Multiphysics Pvt. Ltd.				**12:30 – 12:45:** Escon Gensets Pvt. Ltd.				Conference Valedictory			
		12:45 – 1:00: Magnum Engineers				**12:45 – 12:50:** Tesscorn AeroFluid, Inc							
						12:50 – 12:55: Bruker							
						12:55 – 1:00: Laser Science Services India Pvt. Ltd.							
13:00	14:00	Lunch											
14:00	14:30	Invited talk (Prof. Shyamprasad Karagadde, IITB, India)				Invited talk (Prof. Amitabh Bhattacharya, IITD, India)				Alumni Event			
14:30	15:15	ME Education Panel discussion				Fluids Invited talks (Prof. K. R. Sreenivas, Prof. Sanjay P. Sane, Prof. Debopam Das, Prof. M.S. Bobji, Prof. A.P. Baburaj, Prof. Ratnesh K. Shukla)							
15:15	16:00	ME Research Panel discussion											
16:00	16:30	Poster Session With coffee				Coffee/Tea							
16:30	17:30					Fluids (Reminiscence)							
17:30	18:00					Poster Session							
18:00	19:00												
19:00						Dinner							

ME@75 Oral Presentation Schedule (June 29th, 2022)

Date	Venue	Time	Session Chairs	Category	P-No.	Title
Day 1 - 29th June	Main Hall	9:00AM-9:30AM		**Inauguration**		
		9:30AM-10:00AM	Prof. G. K. Ananthasuresh	Invited talk		**Robust aerial flight control and insect-inspired swarming - Prof. Imraan Faruque**, MAE, Oklahoma State University
		10:00AM-10:30AM		Invited talk		**Fracture mechanics across small length scales: What, why and how? - Prof. Nagamani Jaya Balil**, IITB, Mumbai
		10:30AM-11:00AM		Tea break		
		11:00AM-11:15AM	Prof. Jaywant Arakeri	Flow	5	Evaluation of the effectiveness of air curtain flows using numerical simulations - Tanmay Agrawal, Narsing K Jha and Vamsi Chalamalla
		11:15AM-11:30AM			14	Fluid-Structure-Acoustic Interaction Study on Sound Emitted from Constricted Arteries & its Application in Phonoangiographic Diagnosis - Sumant R Morab, Atul Sharma and Janani S Murallidharan
		11:30AM-11:45AM			18	Large Eddy Simulation Study of a Wind Turbine Sited Behind an Abrupt Surface Roughness Transition - K. Naveen Naik, Kingshuk Mondal and Niranjan S. Ghaisas
		11:45AM-12:00PM			21	Effect of a Downstream Splitter-Plate versus Cylinder on Flow-Induced Vibration of an Elastically Mounted Cylinder - Abhishek Thakur, Subhasis Rath, Sandip Saha and Atul Sharma
		12:00PM-12:15PM			40	Lagrangian Anomalies in Active turbulence - Siddhartha Mukherjee, Rahul K. Singh and Samriddhi Sankar Ray
		12:15PM-12:30PM			25	Electrophoretic trajectory of a non-uniformly charged particle in viscoelastic media - Rajnandan Borthakur and Uddipta Ghosh
	Hall A	11:00AM-11:15AM	Prof. C. S. Jog	Structures	87	Failures in gelatin hydrogels - Anshul Shrivastava, Supreeth M and Namrata Gundiah
		11:15AM-11:30AM			17	Stress Analysis of Circular Machine Component Under In-plane Loading - K.V.N. Surendra and Bijit Kalita
		11:30AM-11:45AM			19	Indentation on highly cross-linked polymer networks - Manoj Kumar Maurya and Manjesh Kumar Singh
		11:45AM-12:00PM			20	Study of frequency fluctuations caused by ambient temperature in two dimensional nanoelectromechanical systems - Swapnil More and Akshay Naik
		12:00PM-12:15PM			24	Continuous analytical solution to Coulomb friction by Harmonic Balance method - B K Karthik, Amar K Gaonkar, V Shrikanth and Naveen M B
		12:15PM-12:30PM			31	Nonlinear vibration of cyclically symmetric structures with contact - Mohit Kumar and Abhijit Sarkar
	Hall B	11:00AM-11:15AM	Prof. Pradip Dutta	Heat Transport	170	Integrated trans-critical CO2 refrigeration system for supermarket applications - Pradeep Gupta, Pramod Kumar, Armin Hafner, Hagar Elarga and Simarpreet Singh
		11:15AM-11:30AM			9	Numerical Investigation on heat transfer enhancement and pumping power of a perforated micro-pin fins heat sink with porous media - Deepa Gupta, Probir Saha and Somnath Roy
		11:30AM-11:45AM			16	Heat transport in rotating Rayleigh-Bénard convection - Vinay Tripathi and Pranav Joshi
		11:45AM-12:00PM			33	On 3D-Visualisation of Thermal Plumes in Turbulent Convection - Prafulla Shevkar, Baburaj Puthenveettil and Rajeev Reddy Sadu
		12:00PM-12:15PM			34	Thermosyphon based heat localization strategy for continuous solar vapor generation with sustained efficiency - Debartha Chatterjee and Sameer Khandekar
		12:15PM-12:30PM			65	Energy efficiency analysis in air assisted impingement jet atomization - Vignesh Kumar D, Anand Tnc and Madan Mohan Avulapati
	Hall C	11:00AM-11:15AM	Prof. Nagamani Jaya Balila	Manufacturing	12	Oxidation analysis of developed CrAlN and CrAlN-Ag PVD Coating - Sumit Rajput, Soumya Gangopadhyay and Filipe Fernandes
		11:15AM-11:30AM			30	Investigation on sintering mechanism of alumina nano-particles on the basis of molecular dynamics simulation - Indrani Mukherjee and Prosenjit Das
		11:30AM-11:45AM			38	Development of Titanium Aluminide through high energy ball milling - Ilyas Hussain and R.J. Immanuel
		11:45AM-12:00PM			47	Investigation of the thermo-hydraulic transport processes during substrate re-melting in laser powder bed fusion additive manufacturing of AlSi10Mg - Ashish Kumar Mishra and Arvind Kumar
		12:00PM-12:15PM			81	Radiation damage and its effect on the mechanical properties of Li2TiO3 - Deepak Ranjan Sahoo and Narasimhan Swaminathan
		12:15PM-12:30PM			107	Multi-body thermal interaction in particle production via abrasion and their performance for metal AM - Harish Singh Dhami and Koushik Viswanathan
	Main Hall	2:00PM-2:30PM	Prof. Saptarshi Basu	Invited talk		**Deformation driven mass transport during phase change - Prof. Shyamprasad Karagadde**, IITB, Mumbai

ME@75 Oral Presentation Schedule (June 30th, 2022)

Date	Venue	Time	Session Chairs	Category	P-No.	Title
Day 2 - 30th June	Main Hall	9:30AM-10:00AM	Prof. K. R. Y. Simha	Invited talk		**Topology, Geometry, and Fracture in Networked Materials: A tale of Scales - Prof. Ahmed E Elbanna**, UIUC
		10:00AM-10:30AM		Invited talk		**Geometry and Mechanics of Crumpled Paper Sheets - Prof. Anurag Gupta**, IITK
		10:30AM-11:00AM		Tea break		
		11:00AM-11:15AM	Prof. Shyamprasad Karagadde	Mutliphase Flows and Flow Instabilities	49	Added mass and drag effect on a buoyant ball - Suryadev Pratap Singh, Harish N Mirajkar, Jaywant Arakeri and K. R. Sreenivas
		11:15AM-11:30AM			50	Continuum Approach-based Accurate Modelling of Blood Flow in a Microchannel - Shivji Prasad Yadav, Amit Agrawal and Atul Sharma
		11:30AM-11:45AM			64	Drop of viscoelastic fluid subjected to uniform electric field - Sarika Bangar and Gaurav Tomar
		11:45AM-12:00PM			78	Effect of particle loading on surface wettability of shear thickening fluids (STFs) - Preeti Yadav, Meka. V.R. Sudheer, Kaustubh Naik, Avanish Singh Parmar and Udita Uday Ghosh
		12:00PM-12:15PM			63	Linear Instabilities in a compressible channel flow - Mandeep Deka, Gaurav Tomar and Viswanathan Kumaran
		12:15PM-12:30PM			62	DNS study of a planar turbulent jet flow: effect of a pintle-shaped orifice - Prince Charles and Vagesh D Narasimhamurthy
	Hall A	11:00AM-11:15AM	Prof. Ashitava Ghoshal	Dynamics	44	Comparative Analysis on Dynamic Replanning over CG-Space of 10 DOF Rover using Modified APF, RRT*, and PSO - Shubhi Katiyar and Ashish Dutta
		11:15AM-11:30AM			94	A monolithic Finite Element Method for coupled fluid-structure-electrostatic interaction problems - Suman Dutta and C. S. Jog
		11:30AM-11:45AM			59	An interactive application to study joint torques for the development of an upper limb exoskeleton - Parvathi Sunilkumar and Santhakumar Mohan
		11:45AM-12:00PM			84	Design of a vibration isolator based on a modified Gough-Stewart platform - Yogesh Pratap Singh and Ashitava Ghosal
		12:00PM-12:15PM			36	A Slender Body Theory for special Cosserat Filaments in Stokes Flow - Mohit Garg and Ajeet Kumar
		12:15PM-12:30PM			58	Repelling Corona Virus with Quantum Electrodynamic Forces - Devaprakasam Deivasagayam
	Hall B	11:00AM-11:15AM	Prof. Vara Naga Surendra Kamadi	Strength of Materials	142	A Multiphase Field Framework Application To Study The Complete Peritectic Reaction At High Undercooling - Umair Hussain, Gandham Phanikumar and Narasimhan Swaminathan
		11:15AM-11:30AM			155	Mechanical and tribological properties of polymer derived nano-ceramic composite of AA6061 - Sachin Kumar and Satish V Kailas
		11:30AM-11:45AM			166	Strength Evaluation of Cold-Formed Steel Stud with Holes using Design Strength Method - Chanchal Sonkar, Siddharth Behera and Aapeksh Tyagi
		11:45AM-12:00PM			176	Automatic Quantification of Fracture Crack Evolution using Full-Field Strain obtained from Digital Image Correlation - Vipin Chandra and Pritam Chakraborty
		12:00PM-12:15PM			179	Gear Fault Detection Using Noise Analysis and Machine Learning Algorithm with YAMNet Pre-trained Network - Sanjana Patil and Kiran Wani
		12:15PM-12:30PM			132	Tactile friction in boundary lubrication - Suyash Gairola, Sanjeev Kumar Gupta and M.S. Bobji
	Hall C	11:00AM-11:15AM	Prof. Atul Sharma	Fluids and Structures	100	Flow over an axisymmetric blunt cylinder: Effect of cavitation on drag and sound level - Rahul R, Dhiman Chatterjee and Shamit Bakshi
		11:15AM-11:30AM			95	Determination of Hydrodynamic Forces and Moments of an AUV Using CFD - Swapnil Jagadale, Vishwanath Nagrajan, Anirban Bhattacharyya and Om Prakash Sha
		11:30AM-11:45AM			89	Cellular Vortical Structures behind a cone in a uniform stream - Uday Raj Singh and O.N. Ramesh
		11:45AM-12:00PM			99	Development of a general pressure equation based incompressible flow solver - Dheeraj R and Sudhakar Yogaraj
		12:00PM-12:15PM			97	Fabrication of Patterned Surfaces with wettability contrast for Multiple Applications - Ravi Kant Upadhyay and Chander Shekhar Sharma
		12:15PM-12:30PM			111	Size and shape of polymer chains in MPCD solvent: Linear vs Star configurations - Prabeen Kumar Pattnayak, Aloke Kumar and Gaurav Tomar
	Main Hall	2:00PM-2:30PM	Prof. Debopam Das	Invited talk		**Nucleate boiling under the effect of externally actuated surfaces - Prof. Amitabh Bhattacharya**, IITD
		2:30PM-4:00PM		Fluids Invited talks		**Prof. K. R. Sreenivas** (JNCASR), **Prof. Sanjay P. Sane** (NCBS), **Prof. Debopam Das** (IITK), **Prof. M.S. Bobji** (IISc), **Prof. A.P. Baburaj** (IITM), **Prof. Ratnesh K. Shukla** (IISc)

ME@75 Oral Presentation Schedule (July 1st, 2022)

Date	Venue	Time	Session Chairs	Category	P-No.	Title
Day 3 - 1st July	Main Hall	9:00AM-10:30AM		Invited Start ME-up Panel Discussion		**Panellists (Prof. Santosh Ansumali** (Sankhyasutra)**, CS Murali** (SID)**, Vijay K** (Ajax Engineering)**, Speaker** from (Bellatrix)**, Prof. Prof. Gurumoorthy** (IISc))
		10:30AM-11:00AM		Tea break		
		11:00AM-11:15AM	Prof. Ratnesh K. Shukla	Fluids	131	Self-assembly driven ripening of nanocrystals - Mona Vishwakarma and Debdip Bhandary
		11:15AM-11:30AM			134	Doublet jet atomization of nanobubble-water suspensions - Vivek K, Aditya Saurabh and Lipika Kabiraj
		11:30AM-11:45AM			136	Can surfactants be used for drug delivery: A molecular dynamics study - Prateek Chowdhury and Debdip Bhandary
		11:45AM-12:00PM			137	Flow around single winged spinning samara models - Yogeshwaran G, Srisha Rao M.V and Jagadeesh G
		12:00PM-12:15PM			161	Scaling drag in atmospheric boundary layer using laboratory ideas - Abhishek Gupta, Harish Choudhary, Shivsai Dixit and Thara Prabhakaran
		12:15PM-12:30PM			172	An improved detector function based on wavelet averaging to calculate transitional intermittency - Aditya Anand, Satyajit De and Sourabh Diwan
	Hall A	11:00AM-11:15AM	Prof. Venkata Sonti	Theory of Machines	108	Data-driven design and optimization of hopping behaviour of robotic leg - Pramod Pal, Ashitava Ghosal and Shishir Kolathaya
		11:15AM-11:30AM			114	Predicting the Effect of Ankle Exoskeleton using Musculoskeletal Optimal Control Simulations - G Karthick and Abhishek Gupta
		11:30AM-11:45AM			120	Emergency Braking Controller for the Overhead Cranes - Arup Deka and Sandeep Basireddy
		11:45AM-12:00PM			135	Dynamics of self-sustained rocking in liquid crystal thin films - Divya Jayoti, Akhil Reddy Pekeeti and Ratna Kumar Annabattula
		12:00PM-12:15PM			175	Multi-harmonic wave interactions in nonlinear structural acoustic waveguides - Biswajit Bharat and Venkata Sonti
		12:15PM-12:30PM			139	Design of partially covered bilayer actuators - Akhil Peeketi, Narasimhan Swaminathan and Ratna Annabattula
	Hall B	11:00AM-11:15AM	Prof. Udita Uday Ghosh	Experimental & Computational Fluid Mechanics	117	Effect of Shock wave boundary layer interaction on liquid jet when injected into supersonic crossflow - Medipati Chandrasekhar, Sivakumar Deivandren and Raghuraman N Govardhan
		11:15AM-11:30AM			127	Direct numerical simulation of coflowing rough and smooth turbulent channel flows - Harish Varma, Karthikeyan Jagadeesan, Vagesh Narasimhamurthy and Amit P Kesarkar
		11:30AM-11:45AM			121	High-order Finite-Volume WENO discretization on unstructured grids - Dipak Vaghani, Sunder Dasika and Ratnesh Shukla
		11:45AM-12:00PM			123	Steady Flow Past a Slotted Circular Cylinder using Power-Law Non Newtonian Fluids - Bishwajit Sharma, Geeta Verma and Rabindra Nath Barman
		12:00PM-12:15PM			122	An Experimental study of flow patterns near moving contact line - Charul Gupta, Lakshmana Dora Chandrala and Harish N. Dixit
		12:15PM-12:30PM			128	Experimental Studies on Fluid Structure Interaction on a flat plate in Hypersonic flows - Kartika Ahuja and Srisha Rao
	Hall C	11:00AM-11:15AM	Prof. Pramod Kumar	Thermodynamics	71	Well-to-Wheels Analysis of Automotive Fuels in Indian Context - Yash Nandola
		11:15AM-11:30AM			112	Droplet growth in turbulent moist convection in a vertical tube - Visakh M G and Jaywant Arakeri
		11:30AM-11:45AM			113	Pressure and temperature evolutions during sloshing in LN2 tank - Nikhil Papetla and Shyama Prasad Das
		11:45AM-12:00PM			48	Prospects of thermochemical energy storage system for heating applications in cold climates - Akshay Chate, Pradip Dutta and Srinivasa Murthy S
		12:00PM-12:15PM			157	Formation of crystal legs on heated hydrophobic surfaces - Pranjal Agrawal, Virkeshwar Kumar and Susmita Dash
		12:15PM-12:30PM			4	Mathematical modelling and development of a cryogenic loop heat pipe with Coherent Porous Silicon (CPS) wick in the flat evaporator - Govind Kumar Mishra, G.S.V.L. Narasimham and R. Karunanithi

ME@75 Poster Presentation Schedule (June 29th, June 30th, 2022)

Presenters are requested to put up their posters by 9 AM on June 29th and take them off by end-of-day on June 30th

Paper No.	Poster Session	Title
		Robotics and Dynamics
74	RD_1	Profile and contact force estimation of cable-driven continuum robots in the presence of obstacles with application
13	RD_2	An analytical expression for maximum total response displacement for a 1-DOF spring-mass-damper system
15	RD_3	Self-excited Vibration Analysis of a Rotor Air-ring Bearing via a Two-degrees of Freedom Approach
22	RD_4	Analytical model for novel single drive three axis MEMS gyroscope
43	RD_5	A Prescience audit of robotics and autonomous systems: A Review
53	RD_6	Comparative Performance of PZT-5H and Single crystal PMN-PT based Piezo Bimorph actuators for propulsion of insect scale Flapping wing Micro Air Vehicle
70	RD_7	Particle Damping experiments on a cantilever beam with permanent magnets under random excitation
174	RD_8	An “Elastica robot”: Tip control in tendon-driven elastic arms
35	RD_9	Comparative Study of Target and Center – Oriented Spinning – Elevation Tracking Method for Heliostats
105	RD_10	Electronically Controlled Marine Cycloidal Propeller by Stepper Motor
		Heat Transfer processes and applications
23	HT_1	Computational Analysis of a Staggered and Double Cross Flow Shell and Tube Heat Exchanger
29	HT_2	NUMERICAL INVESTIGATION OF FLUID FLOW AND HEAT TRANSFER PAST RECTANGULAR CYLINDER WITH ROUNDED FILLETS
69	HT_3	Numerical Analysis of Compound Heat Transfer Enhancement Techniques in Laminar Flow Regime
80	HT_4	Flash Evaporation in a Superheated Liquid Pool
82	HT_5	Development of a Numerical Model for Predicting Dryout Heat Flux of a Thin-film Evaporation Heat Sink
86	HT_6	Radiative Cooling in the Lifted Temperature Minimum Profile
140	HT_7	STUDY OF HEAT TRANSFER ENHANCEMENT WITH THE APPLICATION OF VARIOUS NANOFLUIDS IN A DIFFERENTIALLY HEATED CAVITY
154	HT_8	MATHEMATICAL INSIGHT FOR DEHUMIDIFICATION PROCESS INSIDE A DESICCANT WHEEL
52	HT_9	Penetrative convection in the Nocturnal Atmospheric Boundary Layer and Radiation Fog
92	HT_10	Effect of Effusion Cooling on an Adiabatic Flat Plate for Gas Turbine Application
3	HT_11	Performance of a 9-turn single-plane PHP with water and 50% fill ratio
54	HT_12	Fragmentation of Molten Metal Jets in Simulated Nuclear Reactor Accidents
60	HT_13	Heat Transfer Augmentation in a Duct using Transverse Ribs and Helical Screw Tape insert.
61	HT_14	CFD Simulation on the flow of Graphene-Silver/water Nanofluid through Hexagonal Microchannel Heat Sink
171	HT_15	SCALAR AND TEMPERATURE FIELDS IN AN OFF-SOURCE HEATED JET
41	HT_16	Entropy generation for convective flows in two-dimensional enclosures
183	HT_17	Phonon transport in ultrahigh thermal conductivity materials beyond the relaxation time approximation

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Paper No.	Poster Session	Title
		High Speed and Turbulent Flows
180	HSTF_1	Separation control for supersonic shock wave boundary layer interaction by computationally cooling the leading edge of the wall in a Forward-facing step
119	HSTF_3	DESIGN OF A PLANAR SUPERSONIC WIND TUNNEL NOZZLE
125	HSTF_4	Vortex-bubble interaction: An idealization of multiphase turbulence
138	HSTF_5	Curvature effects in shock wave boundary layer interactions
104	HSTF_6	Computational study of droplet growth in moist turbulent tube convection
7	HSTF_7	Some results from turbulent enstrophy transport in a plume: a DNS study
115	HSTF_8	Numerical Study of Re-laminarizing Boundary Layers
173	HSTF_9	Boundary Layer Transition Caused by Distributed Roughness of Limited Streamwise Extent
		Fluid Flow phenomena
162	FF_1	Does the near-wall region of wall jets behave like a boundary layer ? Implications for monsoon low-level jet
28	FF_2	Lattice Boltzmann Simulation of flow within Staggered Lid Driven Cavities of Varying Geometry
6	FF_3	Effect of interfacial kinetics on the settling of a drop in a viscous medium
73	FF_4	Thin Fluid Film Flow on A Sphere
45	FF_5	To Study the Performance of Vortex Tube for Different Inert Gases using CFD Tool
98	FF_6	Experimental investigation on radial wall jet
90	FF_7	Evaluation of conjugate effect in hourglass (converging-diverging) microchannel
124	FF_8	Applicability of the simplified Reynolds stress equations to rotating rib-roughened channel flows
129	FF_9	Attributes of the Laminar Separation Bubble Formed Over a Bi-scaled Rough Surface
133	FF_10	Characterization of waves on a liquid sheet formed via non-Newtonian impinging jets
153	FF_11	Study of axisymmetric starting jets with passive flexibility at the exit
		Multi Physics and interdisciplinary engineering
83	MP_1	Synthesis, Characterization, and Photoluminescence study of Vanadium Pentaoxide (V2O5) material for optoelectronic applications.
11	MP_2	Thermocapillary effects on viscoelastic droplet suspended in another viscoelastic pressure driven axisymmetric flow
37	MP_4	Conformational temporal changes in transmembrane protein using molecular dynamics
88	MP_5	Risk Assessment of COVID Infection by Respiratory Droplets Inside an Elevator
160	MP_6	The Geometry of Leidenfrost droplets on microtextured surfaces
164	MP_7	Effect of Dissolved and Suspended Solids on the Rupture of an Evaporating Liquid Bridge
165	MP_8	Adsorption and Removal of Carbon Dioxide from Air using Metal Organic Framework (MOFs): A Computational study
130	MP_9	Biomechanics of red blood cells in health and disease
158	MP_10	Mechanics of Cell Adhesion on Substrate with Pillar-ridge Pattern
91	MP_11	Effect of surface inclination on the location of Circular Hydraulic Jump.
72	MP_12	Hygrothermal aging effects of composite solid propellant
182	MP_13	Steady-state and Transient Phonon Transport Studied using a Monte Carlo Solution of Frequency-Dependent Boltzmann Equation

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ME@75 Poster Presentation Schedule (June 29th, June 30th, 2022)

Presenters are requested to put up their posters by 9 AM on June 29th and take them off by end-of-day on June 30th

Paper No.	Poster Session	Title
		Design and Optimization
116	DO_1	Design and analysis of mouldboard plough for soil inversion using discrete element method (DEM) simulations
8	DO_2	Redesign of a spark gap switch assembly towards reduction of volume, weight and ease of assembly
32	DO_3	Topology Optimization of Human Hip Bone with Heterogeneous Lattice Structure
148	DO_4	NUMERICAL AND EXPERIMENTAL TOPOLOGY OPTIMIZATION OF CRANEHOOK
75	DO_5	ENGINE EXHAUST STUB SIZING FOR TURBOPROP POWERED AIRCRAFT
67	DO_6	Development of cost-effective parabolic trough collector using finite element analysis and structural optimization.
79	DO_7	Design optimization of conical draft tube using different geometrical configurations and CFD analysis for Hydro Power Plant
146	DO_8	Damage estimation for composites by reconstituting random load history using rainflow counting technique
		Numerical Methods
101	NM_1	Development of VOF Based two Phase Flow Numerical Model to Study Droplet Dynamics
102	NM_2	Revisiting an Old Formulation for Multivariate Resultants
103	NM_3	Polygonal Finite Element (PFEM) based analysis of thermal conductivity of a polycrystalline sample
106	NM_4	An adaptive sharp interface Immersed boundary technique for coupled fluid-rigid body dynamics
110	NM_5	High order WENO methods for simulation of compressible multiphase flows
167	NM_6	Interface curvature estimation from volume fractions in multi-phase problems
56	NM_7	Optimization techniques for acoustic material selection in rooms
10	NM_8	Consistent description of phase-change processes in substances with density contrast: A finite volume based approach
		Structural Analysis
152	SA_1	Quasi-static study of adhesive contact between an elastic sphere and rigid half-space using FEM
26	SA_2	Shock Analysis Of A Coulomb Damped System Under The Half-Sine Pulse Excitation
66	SA_3	Natural frequencies of water-loaded panels
178	SA_4	Modal Analysis of Plate to Analyze the Effect of Mass Stiffeners Using Chladni Plate Approach
118	SA_5	Design and performance of a projectile impact framework for evaluating advanced structural materials
57	SA_6	Ballistic Impact Study on Natural Rubber and Jute/Epoxy Rubber Sandwiches
39	SA_7	Micromechanical modelling of the influence of stress triaxiality on the failure of High Entropy Alloys (HEAs)
147	SA_8	Numerical Study on Effect of Impactor Geometry on Residual Tensile Properties of Impact Damaged Composite Laminates
2	SA_9	Advancements in intelligent corrosion removal maintenance techniques towards failure prevention and enhanced life of steel structures
77	SA_10	Synergetic effect of atomic interactions and unit cell shrinkage on the H release from Mg-Ni-rGO nanocomposite
96	SA_11	Design methodologies for cold-formed steel built-up I-section stud panels with sheathing under compression
150	SA_13	Investigations of microstructural and microhardness developments in sintered Iron–coal fly ash composites

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Presenters are requested to put up their posters by 9 AM on June 29th and take them off by end-of-day on June 30th

Paper No.	Poster Session	Title
		Manufacturing Processes
151	MP_1	Study of Interfacial Waviness Formation and Jetting Phenomenon during Magnetic Pulse Welding using Smoothed Particle Hydrodynamics (SPH)
55	MP_2	Investigation of Mechanical Behavior of Additive Manufactured Polylactic Acid (PLA) Material
144	MP_3	Sand casting of surface alloyed butterfly valve with improved hardness and corrosion resistance by incorporating metal powders in-mold coatings
68	MP_4	Coupled Phenomena Model for Resistance Spot Welding of AISI 1008 Steel Sheets
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