

International Conference

on

Applied Mathematics and Mechanics (ICAMM 2023)

October 18-20, 2023

Indian Institute of Technology Indore

Email: icamm2023@iiti.ac.in Webpage: <https://icamm.iiti.ac.in/>



Program Schedule

Day-1: 18th Oct'23, Wednesday

Time	Type	Task/Speaker	Title of the talk	Venue
08:00 am - 10:00 am	Registration			
07:30 am - 09:00 am	Breakfast			
09:00 am - 09:30 am	Inauguration			
09:45 am - 10:35 am	Keynote talk	Prof. Manuel Torrilhon (RWTH Aachen Germany)	Extended Fluid Dynamics: Mathematical Modelling and Simulation for Rarefied Gases	1D 105
10:35 am - 11:15 am	Plenary talk	Prof. Vasant Matsagar (IIT Delhi)	Oblate Spheroids for Vibration Response Control	1D 105
11:15 am - 11:30 am	Tea Break			
Special Session I: Seismology & Geophysics				
11:30 am - 12:00 pm	Invited talk	Prof. Supriyo Mitra (IISER Kolkata)	Earthquake hazard in the Himalaya: Lessons learnt from recent earthquakes	1D 105
12:00 pm - 12:30 pm	Invited talk	Dr. Bharath Shekar (IIT Bombay)	Microseismic and ambient noise source inversion	1D 105
12:30 pm - 01:00 pm	Invited talk	Dr. Shib Sankar Ganguli (National Geophysical Research Institute Hyderabad)	The why and how of seismic and geomechanical approaches for effective reservoir characterization	1D 105
01:00 pm - 01:15 pm	Presentations by our sponsors			1D 105
01:00 pm - 02:15 pm	Lunch Break			
02:15 pm - 03:05 pm	Keynote talk	Prof. Karunesh Kumar Shukla (Director, MANIT Bhopal)	Nonlinear Analysis of Curved Panels on Skew Plan-form	Library Seminar Hall
03:05 pm - 03:45 pm	Plenary talk	Prof. Rama Bhargava (IIT Roorkee)	Meshfree methods and its application to numerical Simulation of Cryosurgery Problems	Library Seminar Hall

Parallel Sessions				
Special Session II: Non-Equilibrium Flows (Chair: Prof. Manuel Torrilhon)				
03:45 pm - 04:15 pm	Invited talk	Dr. Anirudh Singh Rana (BITS Pilani)	Two-Temperature Model and Beyond: Exploring Thermodynamic Approaches to Polyatomic Gases	L02
04:15 pm – 04:45 pm	Invited talk	Dr. Harish Kumar (IIT Delhi)	Entropy Stable Numerical Schemes for Chew, Goldberger & Low (CGL) rarefied plasma flow equations	L02
Invited Talk: Session III				
03:45 pm - 04:15 pm	Invited talk	Prof. Sushil Kumar Tomar (Panjab University)	Rayleigh-type waves in microstretch elastic solid half-space containing voids	L01
04:30 pm – 05:15 pm	Tea Break + Poster Presentation			
04:45 pm – 05:15 pm	Invited talk	Dr. Ajay Bangalore Harish (The University of Manchester)	Using physics and data-driven models for cardiovascular engineering	L03
Parallel Sessions				
Paper Presentations: Session I				
05:15 pm – 06:30 pm	Oral Presentations			L01
Paper Presentations: Session II				
05:15 pm – 06:30 pm	Oral Presentations			L02
Paper Presentations: Session III				
05:15 pm – 06:30 pm	Oral Presentations			L03
Paper Presentations: Session IV				
05:15 pm – 06:30 pm	Oral Presentations			L04
Paper Presentations: Session V				
05:15 pm – 06:30 pm	Oral Presentations			L11
Paper Presentations: Session VI				
05:15 pm – 06:30 pm	Oral Presentations			L12
Paper Presentations: Session VII				
05:15 pm – 06:30 pm	Oral Presentations			L13

Day-2: 19 th Oct'23, Thursday				
Time	Type	Task/Speaker	Title of the talk	Venue
09:15 am - 10:05 am	Keynote talk	Prof. G D Veerappa Gowda (TIFR CAM Bangalore)	Well balanced second order Godunov type numerical methods for a coupled system models the growth of a sand pile	1D 105
10:05 am – 10:55 am	Keynote talk	Prof. Sudhirkumar Barai (Director, BITS Pilani)	Ferrochrome Slag Aggregate Concrete: A Life Cycle Assessment Study	1D 105
10:55 am - 11:10 am	Tea Break			
11:10 am – 11:50 am	Plenary talk	Prof. Sergey Kuznetsov (Russian Academy of Sciences)	The Turkey – Syria earthquake of 06.02.2023: Estimates, models, and seismic protection	1D 105
Parallel Sessions				
Invited Talk: Session I				
12:00 pm – 12:30 pm	Invited talk	Prof. Malla Reddy Perati (Kakatiya University)	A Review on Wave Propagation Problems in Poroelasticity in the Perspective of Geometries and Special Functions	1D 105
12:30 pm – 01:00 pm	Invited talk	Prof. Santwana Mukhopadhyay (IIT BHU)	On Moore-Gibson-Thompson Thermoelasticity Theory	1D 105
Invited Talk: Session II				
12:00 pm – 12:30 pm	Invited talk	Dr. Triveni Prasad Shukla (NIT Warangal)	Dynamics of Nonlinear Waves in van der Waals Fluids Exhibiting Mixed Nonlinearity	Library Seminar Hall
12:30 pm – 01:00 pm	Invited talk	Prof. Md. Golam Hafez (Chittagong University of Engineering and Technology, Chattogram, Bangladesh)	Shock wave excitations around critical and super critical values of any specific plasma parameter in dusty plasmas	Library Seminar Hall
01:00 pm – 01:15 pm	Presentations by our sponsors			Library Seminar Hall
01:00 pm – 02:00 pm	Lunch Break			

02:00 pm – 02:40 pm	Plenary talk	Prof. James Sprittles (University of Warwick, UK)	Droplet dynamics in the presence of gas nanofilms: merging, wetting, bouncing & levitation	1D 105
02:40 pm – 03:20 pm	Plenary talk	Prof. S. Sundar (Director, NIT Mizoram)	TBA	1D 105
03:20 pm – 03:50 pm	Invited talk	Prof. Seema Sarkar (Mondal) (NIT Durgapur)	Ground Deformation due to Interacting Fault Movement in Standard Linear Solid with Different Mathematical Approaches	1D 105
03:50 pm – 04:20 pm	Invited talk	Dr. Victor Michel-Dansac (University of Strasbourg)	CFL-less parallel Discontinuous Galerkin solver	Library Seminar Hall
04:20 pm – 04:45 pm	Tea Break			
04:45 pm - 05:15 pm	Panel Discussion			
Parallel Sessions				
Paper Presentations: Session I				
04:45 pm – 06:00 pm	Oral Presentations			L01
Paper Presentations: Session II				
04:45 pm – 06:00 pm	Oral Presentations			L02
Paper Presentations: Session III				
04:45 pm – 06:00 pm	Oral Presentations			L03
Paper Presentations: Session IV				
04:45 pm – 06:00 pm	Oral Presentations			L04
Paper Presentations: Session V				
04:45 pm – 06:00 pm	Oral Presentations			L11
Paper Presentations: Session VI				
04:45 pm – 06:00 pm	Oral Presentations			L12
<i>Banquet dinner</i>				

Day-3: 20th Oct'23, Friday

Time	Type	Task/Speaker	Title of the talk	Venue
09:20 am - 10:00 am	Plenary talk	Prof. Premananda Bera (IIT Roorkee)	Stability of non-isothermal-Poiseuille flow in a fluid overlying an anisotropic and inhomogeneous porous domain	1D 105
10:00 am – 10:40 am	Plenary talk	Prof. C. W. Lim (City University of Hong Kong)	Voltage Controlled Topologically Protected Wave Propagation in Dielectric Membrane-type Acoustic Metamaterials	1D 105
10:40 pm – 11:10 pm	Invited talk	Prof. Gopal Ch. Shit (Jadavpur University)	Enhancing targeted drug delivery with magnetic nanoparticles and MPI-guided hyperthermia	1D 105
11:10 am - 11:30 am	Tea Break			
11:30 am – 12:10 pm	Plenary talk	Prof. Amit Agarwal (IIT Bombay)	Quest for Equations beyond the Navier-Stokes	1D 105
Parallel Sessions				
Paper Presentations: Session I				
12:15 pm – 01:30 pm	Oral Presentations			L01
Paper Presentations: Session II				
12:15 pm – 01:30 pm	Oral Presentations			L02
Paper Presentations: Session III				
12:15 pm – 01:30 pm	Oral Presentations			L03
Paper Presentations: Session IV				
12:15 pm – 01:30 pm	Oral Presentations			L04
Paper Presentations: Session V				
12:15 pm – 01:30 pm	Oral Presentations			L11
Paper Presentations: Session VI				
12:15 pm – 01:30 pm	Oral Presentations			L12

01:30 pm – 01:45 pm	Presentations by our sponsors			1D 105
01:30 pm - 02:30 pm	Lunch Break			
02:30 pm – 03:20 pm	Keynote talk	Prof. Julius Kaplunov (Keele University, UK)	Generalisations of Saint-Venant's principle	1D 105
03:20 pm – 03:50 pm	Invited talk	Dr. Prashant Saxena (The University of Glasgow, UK)	A fully coupled nonlinear magnetoelastic thin shell formulation	1D 105
03:50 pm – 04:20 pm	Valedictory Session			
04:20 pm	Tea Break			

Parallel Sessions (18th Oct'23, Wednesday)

Paper Presentations: Session I

05:15 pm – 06:30 pm	Oral Presentations	L01
	Fictitious domain method with a penalty for the linear elasticity problem <i>Swapnil Kale, Vivek S. Yadav, and Nagaiah Chamakuri</i>	
	Effect of irregular geologies on SH-wave propagation in functionally graded magneto-electro-elastic half-space <i>K. Hemalatha, S. Kumar</i>	
	Love Wave Propagation in a FRV Layer Imperfectly bonded over a Microstructural Coupled Stress Half-Space <i>Mohd Sadab, and Santimoy Kundu</i>	
	Love wave propagation in the functionally graded composite media under the impact of point source. <i>Uma Bharti*, Pramod Kumar</i>	
	Plane waves in an elastic solid under non-uniform rotary motion <i>Suraj Goyal</i>	
	Numerical studies on the classical long wave system describing shallow water waves with dispersion <i>Abhilash Chand and S. Saha Ray</i>	

Paper Presentations: Session II

05:15 pm – 06:30 pm	Oral Presentations	L02
	Thermal nonequilibrium effect of non-monatomic gases on Richtmyer-Meshkov instability induced by triangular interface <i>Satyvir Singh and Manuel Torrilhon</i>	
	Temperature-induced rarefied gas flows: An approach through the method of fundamental solutions <i>Himanshi, Anirudh Singh Rana and Vinay Kumar Gupta</i>	
	Mathematical model of transport of non-Newtonian fluid in two-layered catheterised oesophageal tube <i>Anupam Kumar Pandey*, Sanjay Kumar Pandey</i>	
	Method of fundamental solutions for nonlinear problems in porous media and electrohydrodynamic flows <i>Ankit Farkya, Masrakain Ahmad and Anirudh Singh Rana</i>	
	Divergence Free Entropy Stable Schemes for Two-Fluid Plasma flow equations <i>Jaya Agnihotri*, Deepak Bhojariya, Harish Kumar, Praveen Chandrashekar, and Dinshaw S. Balsara</i>	

	Differential constraints and exact solution to generalize Riemann problem for a generalized Chaplygin gas <i>Gaurav* and L. P. Singh</i>	
Paper Presentations: Session III		
05:15 pm – 06:30 pm	Oral Presentations	L03
	Genetic Algorithm based Solution for Secure Domination Problem in Graphs <i>Sista Gopala Krishna and P. Venkata Subba Reddy*</i>	
	Positive solutions for a class of singular semipositone nonlocal fractional boundary value problem <i>S. Panigrahi, and Raghvendra Kumar</i>	
	Study on starlikeness of regular coulomb wave functions via continued fractions <i>Pranav Kumar</i>	
	Discrete heat equation with irregular thermal conductivity and tempered distributional data <i>Marianna Chatzakou, Aparajita Dasgupta, Michael Ruzhansky, Abhilash Tushir</i>	
	Backward error analysis of specified eigenpairs of a semisimple eigenvalue for T -symmetric, T -skew symmetric, T -even, T -odd, T -palindromic and T -anti-palindromic matrix pencils <i>Gyan Swarup Nag, Prince Kanhya, Sk. Safique Ahmad</i>	
	Forecasting Black Carbon Concentration using Time Series Analysis and Machine Learning Models <i>Jatinder Kaur, Sarbjit Singh and Kulwinder Singh Parmar</i>	
Paper Presentations: Session IV		
05:15 pm – 06:30 pm	Oral Presentations	L04
	Study of Rayleigh Waves in a Pre-stressed Anisotropic Layer Overlying a Sandy Half-space <i>Neetu Malik, Komal Gajroiya and Jitander Singh Sikka</i>	
	Comprehensive Study of Isogeometric Analysis of Crash Box <i>Vasanthkumar B. Kallannavar* , Shivashankar R. Srivatsa</i>	
	The effect of porosity distributions on static analysis of porous FGM plate in framework of a new shear deformation theory <i>Mohit Dhuria* , Kavita Goyal and Neeraj Grover</i>	
	Buckling Analysis of Porous Uni-Directional Functionally Graded Material Sandwich Plate using Sinusoidal Shear Deformation Theory <i>Supen Kumar Sah, Anup Ghosh</i>	

	<p>Shifted Chebyshev Polynomials based Rayleigh-Ritz Method for Hygro-Magneto Vibration of Euler–Bernoulli Nanobeam resting on Winkler-Pasternak Elastic Foundation</p> <p><i>Subrat Kumar Jena</i></p>	
	<p>Mathematical Modeling for Assessing Mechanical Attributes of GGBS Concrete</p> <p><i>Anamika Agnihotri, P.V. Ramana*</i></p>	
Paper Presentations: Session V		
05:15 pm – 06:30 pm	Oral Presentations	L11
	<p>The Influence of Groove Structure Parameters on laminar fluid flow and heat transfer characteristics in a grooved channel: A Numerical study</p> <p><i>Oeshee Das, Ananya Mandal, Auronil Mukherjee and Supratim Saha</i></p>	
	<p>Selection Mechanism in Non-Newtonian Saffman-Taylor Fingers</p> <p><i>Diksha Bansal, Dipa Ghosh and Sarthok Sircar*</i></p>	
	<p>Wave energy extraction by an OWC over a porous bed</p> <p><i>Nikita Naik*, Harekrushna Behera</i></p>	
	<p>A study of non-Newtonian core fluid behavior in a horizontal perfect core-annular flow</p> <p><i>Mayank K. Saini, Shreyaskar Gautam, and Sumit Tripathi</i></p>	
	<p>Wave scattering by a circular cylinder: A time-marching perspective</p> <p><i>Aman Kumar Kushwaha*, Harekrushna Behera and Vinay Kumar Gupta</i></p>	
	<p>Multi-scale analysis of contaminant dispersion in an asymmetric flow</p> <p><i>Radha S and Swarup Barik *</i></p>	
Paper Presentations: Session VI		
05:15 pm – 06:30 pm	Oral Presentations	L12
	<p>Application of Deep Learning Techniques for Structural Health Monitoring and Damage Detection in Civil Infrastructure</p> <p><i>Achal Agrawal and Nidhi Asthana</i></p>	
	<p>Smart voting model by implementing face recognition technique</p> <p><i>Kshatrapal Singh*, Yogesh Kumar Sharma, Arun Kumar Rai, Vijay Shukla</i></p>	
	<p>An Intelligent System for Nutrition Deficiency Detection using Deep Learning Techniques</p> <p><i>Vani Rajasekar, Sabarnika S</i></p>	
	<p>An Efficient Classification of Mental Depressive Disorder using Deep Learning Techniques</p> <p><i>Vani Rajasekar* and Sharan R</i></p>	

	A Machine Learning based geometric analysis of stock market <i>Pawanesh Yadav*</i> , <i>Charu Sharma and Niteesh Sahni</i>	
	Enhancing Quantum Harmonic Oscillator through PCA to Predict Credit Risk Defaulters <i>Atman Bhatt, Dr. Ravi Gor</i>	
Paper Presentations: Session VII		
05:15 pm – 06:30 pm	Oral Presentations	L13
	Convergence Analysis of Galerkin and Iterated Galerkin method for Emden-Fowler Integral Equation with Green's kernel <i>Payel Das, Pratikshya Manini Sahoo, Randhir Singh</i>	
	Application of the Composite Finite Element framework for Evolution equations <i>Anjaly Anand, Tamal Pramanick</i>	
	A fifth-order WENO scheme with exponential basis for solving dispersive equations <i>Lavanya V Salian, Samala Rathan</i>	
	Investigation of the condition number of a numerical scheme for systems of Cauchy singular integral equations <i>Abhishek Yadav* and Amit Setia</i>	

Parallel Sessions (19th Oct'23, Thursday)		
Paper Presentations: Session I		
04:30 pm – 05:45 pm	Oral Presentations	L01
	Effect of Interacting Fault Movement by using Fractional Calculus Method <i>Piu Kundu* and Anil Negi</i>	
	Evaluation of M/ G/I/K queue with a Variant of Multiple Vacation Policy using Fuzzy Segmentation <i>K. Sikdar Putul Dutta</i>	
	Fixed-time stability of nonlinear systems with destabilizing impulsive effects and its application to neural networks: a novel and economical control <i>Md Arzoo Jamal and Santwana Mukhopadhyay</i>	
	Numerical Solutions of Korteweg-de Vries equations by Quintic B-spline functions <i>Anisha and Rajni Rohila</i>	
	Fiedler linearizations of multivariable state-space system and its associated system matrix <i>Namita Behera*, Avisek Bist, and Volker Mehrmann</i>	

	Perspective of Quaternion Algebra in Quantum Mechanics: Quaternion inverse Gaussian distribution <i>Pratibha Sharma* and V. R. Lakshmi Gorty</i>	
Paper Presentations: Session II		
04:30 pm – 05:45 pm	Oral Presentations	L02
	Nonlinear Convection in a fluid saturated porous enclosure <i>Brinda R. K.</i>	
	A modified general model of tropical cyclone <i>Prem Singh*, Sanjay Kumar Pandey</i>	
	Dynamics of Tsunami Wave Propagation in Fuzzy Environment <i>Mrutyunjaya Sahoo*, S. Chakraverty</i>	
	Effects of alteration of pathways of liquid streams on the formation of droplets in microchannels <i>Swati Ralekar and V. N. Lad</i>	
Paper Presentations: Session III		
04:30 pm – 05:45 pm	Oral Presentations	L03
	Comparative Assessment on Unsteady Aerodynamics of Thin and Thick Airfoils Subjected to Pitching Motion <i>Masuruddin Shaik * , Utthej Pentakota, Bapu Abhiram Naidu Kothali, Sahil Patnaik, Nalini Lekkala, Tamilarasan Arulvalavan</i>	
	Existence of a weak solution to the fluid-structure interaction problem of blood flow in coronary artery <i>Nishant Ranwan* and Nagaiah Chamakuri</i>	
	Study of magnetohydrodynamic flow of a Couple stress fluid induced by rhythmic membrane through a channel containing porous medium <i>Ankit Prajapati*, Sanjay Kumar Pandey</i>	
	Spatiotemporal linear stability of viscoelastic subdiffusive channel flows <i>Tanisha Chauhan, Diksha Bansal and Sarthok Sircar*</i>	
	Effect of radially varying magnetic field on the peristaltic blood flow through annulus region between two flexible tubes with permeable wall <i>Dr. Pramod Kumar Yadav and Muhammad Roshan*</i>	
	Stability of plane Poiseuille flow in an anisotropic porous channel <i>Supriya Karmakar* and Priyanka Shukla</i>	
Paper Presentations: Session IV		
04:30 pm – 05:45 pm	Oral Presentations	L04

	<p>Coupled Systems Of Nonlocal Balance Laws <i>Aekta Aggarwal</i></p>	
	<p>A Vector Finite Element Approach to Microwave Ablation for Liver Cancer <i>Gangadhara Boregowda and Panchatcharam Mariappan</i></p>	
	<p>High order weak Galerkin finite element methods for $H(\text{curl};\Omega)$-elliptic interface problems with non-homogeneous jump conditions <i>Achyuta Ranjan Dutta Mohapatra, Raman Kumar and Bhupen Deka*</i></p>	
	<p>Unified discontinuous Galerkin finite element methods for second order Dirichlet boundary control problem <i>Divay Garg*, Kamana Porwal</i></p>	
	<p>A Hybrid PINN-FD Method For Elliptic PDEs <i>Gaurav Kumar Yadav*, Balaji Srinivasan</i></p>	
	<p>An Efficient Generalized Finite Difference Method for Elliptic PDEs <i>Priyal Garg, T.V.S. Sekhar</i></p>	
Paper Presentations: Session V		
04:30 pm – 05:45 pm	Oral Presentations	L11
	<p>Existence Solution for Sobolev Type Fuzzy Integro-differential Evolution Equation in n - Dimensional Fuzzy Vector Space <i>M.Nagarajan*, K.Karthik and P.Chandrasekaran</i></p>	
	<p>A robust approach for exact and numerical solutions for multi term mixed order fractional differential equations <i>Shakti Singh Rao, L. K. Balyan*</i></p>	
	<p>Solution of fractional-order two-dimensional nonlinear advection reaction diffusion equation <i>Anup Singh</i></p>	
	<p>Solution of First Order Non-exact Nonlinear Singular Initial Value Problems using an Operational Matrix <i>Kshama Sagar Sahu and Mahendra Kumar Jena</i></p>	
	<p>Scale-Invariant Object Detection by Switchable Atrous Convolution with Global Context <i>Amrita Singh, Snehasis Mukherjee*</i></p>	
	<p>Modelling two-lane transport system through partial differential equations <i>Tamizhazhagan S, Atul Kumar Verma*</i></p>	
Paper Presentations: Session VI		
04:30 pm – 05:45 pm	Oral Presentations	L12

	Does the Raychaudhuri equation identify the classical and quantum replica of gravitational singularity? <i>Madhukrishna Chakraborty* and Subenoy Chakraborty</i>	
	A viscous inflationary cosmological investigation using holographic fluid as the inflationary fluid <i>Moli Ghosh, Surajit Chattopadhyay</i>	
	Clifford wavelet function and Mellin transform in Clifford algebra $Cl(3,1)$ with interpretation in quantum mechanics <i>Shabnam Jahan Ansari, and V. R. Lakshmi Gorty</i>	
	Neutron Star evolution in $f(Q)$ modified gravity framework <i>Samprity Das, Surajit Chattopadhyay</i>	
	Probing The Inflationary Cosmology in $f(Q, T)$ framework with Holographic Background Fluid <i>Khandro K Chokyi, Surajit Chattopadhyay</i>	

Parallel Sessions (20th Oct'23, Friday)

Paper Presentations: Session I

12:15 pm – 01:30 pm	Oral Presentations	L01
	Taguchi Optimization of AISI D-2 die steel using Graphite based Electrical Discharge Coating (EDC) <i>Mohit Singhal, Shalini Singha, Jogendra Bhartia*, Muthukannan Duraiselvamb, Anurag Harsh</i>	
	Application of AI/ML in the field of Aircraft structural Analysis <i>Subhashis Pati* and Sivakumar M Srinivasan</i>	
	AI-driven Urban Planning: Enhancing Infrastructure and Livability <i>RSK Akash, Sonu Kumar Singh*, Prof. Sandeep Chaudhary*</i>	
	A computational framework to investigate the local inelastic behavior of two-level hierarchical solids under large plastic deformation <i>Naresh Chockalingam and Narayan K. Sundaram</i>	
	Steady State Analysis of a Feedback Machine Repair Queuing Model with Reverse Balking and Retention of Reneged Machines <i>C K Anjali and Sreekanth Kolledath*</i>	
	Experimental Investigation of a PCM-Enhanced Building Envelope Towards Energy Savings and Mitigation of Carbon Emissions During Hot Climates <i>Peerzada Jaffar Abass, Muthulingam Subramaniyan</i>	

	A novel mathematical model for temporal effect of buildup and breakdown on cement rheology <i>Sanchit Gupta, Dhruv Narayan Lal, Astha Sharma and Sandeep Chaudhary*</i>	
Paper Presentations: Session II		
12:15 pm – 01:30 pm	Oral Presentations	L02
	Modeling of SH wave Propagation using Spectral Element method <i>Saurabh Agarwal*, Surendra Beniwal and Debdutta Ghosh</i>	
	Plane waves in chiral thermoelastic medium with voids under strain gradient theory <i>Aakash Kumar, Suraj Goyal</i>	
	Analysis of the thermoelastic damping of the piezothermoelastic nanobeam resonators based on the moore-gibson-thompson heat conduction model <i>Anjali Srivastava, Santwana Mukhopadhyay</i>	
	Solution of Hyperbolic system with magnetic field <i>Pradeep*, Rahul Kumar Chaturvedi, L. P. Singh</i>	
	Thermodynamically consistent modified Lord-Shulman generalized thermoelasticity with strain-rate <i>Indranil Sarkar* & Gaurav Singh</i>	
	Numerical simulation of the electromechanical coupling of the heart <i>Gopika P B, Aswin V S, and Nagaiah Chamakuri</i>	
Paper Presentations: Session III		
12:15 pm – 01:30 pm	Oral Presentations	L03
	Two level Trade Credit Criteria and Discount Policy for Deteriorating Items with Linearly Increasing Demand <i>Khyati* and Ashendra Kumar Saxena</i>	
	On – Ricci Solitons of Sasakian Manifold <i>Sushil Shukla</i>	
	Lie symmetry analysis for similarity reduction and exact solutions of the Bogoyavlensky-Konoplechenko equation <i>Mukesh Kumar and Shristi Srivastava*</i>	
	Unraveling the Dynamics of IoT Epidemics: Mathematical Analysis with a Compartment Model <i>Apeksha Prajapati</i>	
	Two-Link Robotic Manipulators in Uncertain Environment <i>Priya Rao*, S. Chakraverty, Debanik Roy</i>	

	Numerical simulation of avascular tumor growth model with drug interaction using space-time adaptivity <i>Vivek S. Yadav, Nagaiah Chamakuri</i>	
Paper Presentations: Session IV		
12:15 pm – 01:30 pm	Oral Presentations	L04
	An Inventory Model For Deteriorating Goods With Exponential Declining Demand, Partial Stockpiling, And Fluctuating Holding And Ordering Cost With Salvage Value <i>Garima Khare and Garima Sharma</i>	
	Solution Of Linear Programming Problem With Grey Cost Coefficients Using Revised Simplex Method <i>Monika Lalwani</i>	
	A Kernel Based LS-SVM Approach for Approximating the Solution of Linear and Nonlinear Ordinary Differential Equations Incorporated with the Primal Dual Optimization Formulation <i>Bhubaneswari Mishra, S. Chakraverty</i>	
	Mathematical modelling of Hybrid Morphnus Guianensis- Acinonyx Jubatus Soemmeringii inspired Optimization Algorithm for True Power Loss Reduction <i>Dr. Lenin Kanagasabai*</i>	
	Portfolio Optimization based on Mesoscale Structure in Financial Networks <i>Imran Ansari*, Niteesh Sahni</i>	
	Sustainable inventory model for deteriorating items: integrating partial backordering, social and environmental responsibility, and learning effect <i>Amrita Bhadoriya and Mrudul Y. Jani</i>	
Paper Presentations: Session V		
12:15 pm – 01:30 pm	Oral Presentations	L11
	Stability Analysis and Bifurcations analysis of Rosenzweig Mac-Arthur predator-prey model with Holling type II functional response incorporating constant prey immigration <i>Manisha Yadav, Pradeep Malik</i>	
	Numerical solution of fuzzy fractional order HIV dynamic model under granular differentiability <i>Dhabaleswar Mohapatra* and S. Chakraverty</i>	
	Triangular basis function based solution of fractional-order epidemiological model for computer viruses <i>Shweta Dubey, S. Chakraverty, and M. Kundu</i>	

	Polynomial eigenvalue problems for complex interval matrices and their application in the stability of dynamical systems <i>Suman Maiti* and S. Chakraverty</i>	
	Multiple stability switches with Hopf bifurcation in a delayed prey-predator eco-epidemiological model <i>Sevak Ram Sahu*, Sharada Nandan Raw</i>	
	Effect of delay and control on a predator-prey ecosystem with generalist predator and group defence in the prey species <i>Rajesh Ranjan Patra*, Soumen Kundu and Sarit Maitra</i>	

Paper Presentations: Session VI

12:15 pm – 01:30 pm	Oral Presentations	L12
	Love type wave in a pre-stressed nonlocal orthotropic medium sandwiched by two nonlocal half-space <i>Tapas Halder*, Santanu Manna, and Bappa Das</i>	
	Love-like wave propagation in a piezoelectric-coated layer with the influence of sliding contacts and impulsive point source <i>Dipendu Pramanik*</i>	
	Control of Rayleigh waves in a nonlocal layered media with parallel nonlinear spring resonators <i>Manasa Bhat*</i>	
	Localized wave near the edge of a nonhomogeneous sandy plate <i>Rahul Som*</i>	

Paper Presentations (18th Oct'23, Wednesday)

04:30 pm – 05:15 pm	Poster Presentations	Lecture Hall Complex
	Extensive analysis of transverse wave behavior in a graded Magneto-Electro-Elastic half-space with a corrugated interface <i>A. Akshaya, S. Kumar</i>	
	Propagation of Bleustein Gulyaev (BG) waves in a functionally graded piezomagnetic material (FGPM) layered composite System <i>Sanchit Das</i>	
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