SCHEDULE | MONDAY, DECEMBER 8 (LHC - KAUMUDI)

08:30 – 09.10	**Registration**	
09.10 – 09.30	**Inauguration**	
Chair: Peter Bastian	**09:30 – 10:05**	**Martin Weiser (Zuse Institute Berlin)**
	Title	*Adaptive solvers for cardiac electrophysiology simulations*
	10:10 – 10:45	**A.K.Pani (IIT Bombay & BITs-Goa)**
	Title	*On Backward Time-Fractional Diffusion Problems: A Unified Approach*
10:50 – 11:10	**Coffee/Tea break**	
Chair: Kamana Porwal	**11:10 – 12:40**	A Posteriori Error Analysis and Adaptive FEM - 1 (4 talks, Room: LHC 105- G N Ramachandran)
	11:10–11:40	Kamana Porwal (IIT Delhi): Adaptive quadratic finite element method for a unilateral contact problem
	11:40–12:00	**Tooba M. Shaikh (Indian Institute of Science Education and Research Thiruvananthapuram)**: Adaptive Mixed Finite Element Method for Distributed Optimal Control Problems : Quasi-Optimality
	12:00–12:20	**Arnab Pal (Indian Institute of Science)**: Convergence and Quasi-Optimality of an AFEM via Inf-Sup Stability for a Dirichlet Boundary Control Problem.
	12:20–12:40	**Avinash K (Manipal Institute of Technology, MAHE, Manipal)**: On the Convergence of the Modified Scale-3 Haar Wavelet Method for Solving Elliptic PDEs
Chair: Pratik Nayak	**11:10 – 12:40**	HPC/Scientific Machine Learning - 1 (4 talks, Room: LHC 103- Kaumudi)
	11:10–11:40	**Pratik Nayak (Technical University of Munich)**: Batched GPU solvers for large scale simulations
	11:40–12:00	**Sarthak Sharma (National institute of technology warangal)**: Physics-Informed Deep Learning for Solving Coupled Nonlinear Systems: A PINN-Based Approach for Multiphysics Transport
	12:00–12:20	**Ashifa Khan (Jamia Millia Islamia)**: Exponentially fitted mesh spline approach for the numerical study of mathematical model arising from a model of neuronal variability.
	12:20–12:40	**Nida Izhar Mallick (Jamia Millia Islamia)**: A simple and efficient iterative scheme for image restoration
Chair: Saumya Bajpai	**11:10 – 12:40**	Recent Advances in Numerical Methods for Newtonian and Viscoelastic Fluid Models - 1 (4 talks, Room: LHC 106- P C Ray)
	11:10–11:40	Saumya Bajpai (IIT Goa): Local Discontinuous Galerkin Method for Kelvin-Voigt Viscoelastic Fluid Flow Model
	11:40–12:00	**Debendra Kumar Swain (IIT Goa)**: Discontinuous Galerkin two–grid method for the transient Boussinesq equations
	12:00–12:20	**Antara Wajpe (National Institute of Technology Warangal)**: Fluid Flow Analysis In Curved Pipes Using Homotopy Analysis Method
	12:20–12:40	**Shishu Pal Singh (Rajiv Gandhi Institute of Petroleum Technology)**: Finite Difference Method for Global Stabilization of the Viscous Burgers' Equation with Nonlinear Neumann Boundary Feedback Control
12:40 – 13:50	**Lunch**	
Chair: Hartwig Anzt	**13:50 – 14:25**	**Olaf Ippisch (TU Clausthal)**
	Title	*Efficient, Hybrid-Parallel Linear Algebra for Sparse Matrices*
	14:30 – 15:05	**Prabhu Ramachandran (IIT Bombay)**
	Title	*Adaptive Resolution for SPH with Reproducible Open Source Software*
15:10 – 15:20	**Group Photo I**	
15:20 – 15:40	**Coffee/Tea break**	

Chair: Praveen C	**15:40 – 16:15**	**Alexander Heinlein (TU Delft)**
	Title	*Neural Network-Based Models for Physical Systems: Analysis, Domain Decomposition, and Preconditioning*
Chair: Kamana Porwal	**16:20 – 18:00**	A Posteriori Error Analysis and Adaptive FEM - 2 (4 talks, Room: LHC 105- G N Ramachandran)
	16:20–16:40	**Subham Nayak (IISER Thiruvananthapuram)**: Adaptive nonconforming FEM for distributed optimal control problems governed by m-harmonic equations
	16:40–17:00	**Vikas Kumar (Visvesvaraya National Institute of Technology, Nagpur, Maharashtra)**: H^1-norm error estimate of a compact ADI finite difference scheme for the 2D multi-term time-fractional convection-diffusion equation governing groundwater pollution
	17:00–17:20	**Sahu Nagesh Sumanshankar (Sardar Vallabhbhai National Institute of Technology, Surat)**: Semi-Analytical Solutions of Counter-Current Imbibition Phenomena Using DTM and RDTM
	17:20–17:40	**Rupal Aggarwal (Manipal University Jaipur)**: Numerical solution of delay differential equation using wavelet method
	17:40–18:00	**Ravi Shankar Prasad (Sardar Vallabhbhai National Institute of Technology, Surat)**: Numerical study of brain tumor growth in 2D irregular domain with variable-order time-fractional derivative
Chair: Ratikanta Behera	**16:20 – 18:10**	HPC/Scientific Machine Learning - 2 (5 talks, Room: LHC 103- Kaumudi)
	16:20–16:40	**Ziya Uddin (BML Munjal University, Gurugram, India)**: Physics Informed Optimal Homotopy Analysis Method (PI-OHAM): A Hybrid Analytical–Computational Framework for Solving Differential Equations
	16:40–17:00	**Subhashri A R (Vellore Institute of Technology, Vellore)**: Global Polynomial Synchronization of Stochastic Reaction Diffusion Neural Networks via Dynamic Hybrid Triggered Control with Cyber-Attacks
	17:00–17:20	**Vijay Kag (Robert Bosch Research and Technology Center Bangalore)**: Learning Hidden Physics and System Parameters with Deep Operator Networks
	17:20–17:40	**Muhammad Roshan (SRM IST Kattankulathur Chennai)**: A machine learning approach for dynamic prediction of a physiological flow through an annulus between two peristaltic tubes: Applications in biomedicin
	17:40–18:10	Ratikanta Behera (IISc): Neural Network Models for the Dynamic Moore-Penrose Inverse of Tensors
Chair: Saumya Bajpai	**16:20 – 18:00**	Recent Advances in Numerical Methods for Newtonian and Viscoelastic Fluid Models - 2 (5 talks, Room: LHC 106- P C Ray)
	16:20–16:40	**Jeremy Rymbai (North-Eastern Hill University (NEHU), Shillong, Meghalaya, India)**: Nanoparticle aggregation kinematics in hybrid nanofluid over a stretching surface
	16:40–17:00	**Hemalatha Veedhuluri (National Institute of Technology, Warangal)**: Flow separation-induced stability and bioconvection dynamics in water-based AA7075 nanofluid with gyrotactic microorganisms
	17:00–17:20	**Himanshu Upreti (BML Munjal University)**: Thermal Analysis of Casson Hybrid Nanofluid Around a Circular Cylinder Using DTM
	17:20–17:40	**Tapan Kumar Muduli (Visvesvaraya National Institute of Technology (VNIT), Nagpur)**: Lie symmetry analysis of a nonlinear system of partial integro differential equations arising in thermoviscoelasticity
	17:40–18:00	**Jyoti Yadav (Visvesvaraya National Institute of Technology, Nagpur)**: An Efficient High-Order Scheme for 2D Caputo Time-Fractional CDR Equations with Weak Initial Singularity: Analysis and Computation
19:30	**Dinner at VFR**	

SCHEDULE | TUESDAY, DECEMBER 9 (LHC - KAUMUDI)

08:45 – 09.00	**Registration**	
Chair: Volker John	**09:00 – 09:35**	**Dmitri Kuzmin (TU Dortmund)**
	Title	*Convex limiting and entropy fixes for finite element discretizations of nonlinear hyperbolic problems*
	09:40 – 10:15	**Praveen Chandrashekar (TIFR-CAM Bangalore)**
	Title	*Continuous Galerkin method for compressible flows*
	10:20 – 10:55	**Martin Falcke (MDC Berlin)**
	Title	*The role of sub-dyadic structure for whole cell behavior – multiscale modelling for cardiology*
11:00 – 11:20	**Coffee/Tea break**	
Chair: Aekta Aggarwal	**11:20 – 12:50**	Numerical Methods for Hyperbolic Conservation Laws - 1 (4 talks, Room: LHC 105- G N Ramachandran)
	11:20–11:40	**Sanjibanee Sudha (Indian Institute of Petroleum and Energy, Visakhapatnam, Andhra Pradesh 530003.)**: Second order central schemes for 1D systems of nonlocal balance laws.
	11:40–12:00	**Subhodip Ghosh (IISER Thiruvananthapuram)**: Discontinuous Galerkin methods for Weak and Temple-type Hyperbolic conservation laws
	12:00–12:20	**Balwinder Singh (Indian Institute of Science, Bengaluru)**: A compactly supported distribution function based contact discontinuity capturing Boltzmann scheme
	12:20–12:40	**Samala Rathan (Indian Institute of Petroleum and Energy Visakhapatnam)**: Semi-implicit central scheme for hyperbolic systems of balance laws with relaxed source term
Chair: Ratikanta Behera	**11:20 – 12:50**	HPC/Scientific Machine Learning - 3 (4 talks, Room: LHC 103- Kaumudi)
	11:20–11:50	**Mayank Kumar Bijay (TIFR-ICTS)**: Neural Networks Predicting Submesoscale Tracer Dispersion
	11:50–12:10	**Anju (VNIT Nagpur)**: Hybrid Physics-Informed Neural Networks with Adaptive Flux Correction for Hyperbolic PDEs
	12:10–12:30	**Meenu (Vinoba Bhave University, Hazaribag, Jharkhand)**: Neural Network Stabilization of Chaotic Cancer Dynamics Derived from Perturbation-Reduced Models
	12:30–12:50	**Atul Kaushik (National Institute of Technology Warangal)**: Neural Network-Based Analysis of MHD Jeffery-Hamel Flow for Couple Stress Fluids in Stretching/Shrinking Channels
Chair: Saumya Bajpai	**11:20 – 12:50**	Recent Advances in Numerical Methods for Newtonian and Viscoelastic Fluid Models - 3 (4 talks, Room: LHC 106- P C Ray)
	11:20–11:40	**Nishant Ranwan (IISER Thiruvananthapuram)**: The finite element analysis of a fluid–structure interaction problem in fixed domains
	11:40–12:00	**Bhramarbar Behera (National Institute Of Technology Silchar)**: Galerkin Finite Element Analysis Of Singularly Perturbed Integro-Differential Convection–Diffusion Problems With Time Delay
	12:00–12:20	**Udeshna Bhattacharya (National Institute of Technology, Silchar)**: Streaming potential and electro viscous behavior in soft cylindrical nanochannels incorporating slip effects
	12:20–12:40	**Rajesh Chary Kandukoori (National Institute of Technology Warangal)**: Magneto-Hydrodynamics Ternary Nanofluids Flow over an Exponentially Stretching Porous Sheet with Variable Properties: Entropy Generation

Chair: Murali Mohan	**11:20 – 12:50**	From Algorithms to Applications: Numerical Methods for PDEs - 3 (4 talks, Room: LHC 107- S Ramanujan)
	11:20–11:50	G. Murali Mohan Reddy (BITS Pilani Hyderabad): Elliptic reconstruction and a posteriori error estimates for parabolic partial differential equations with small random input data
	11:50–12:10	**Vishal Tiwari (Indian Institute of Technology Ropar)**: A novel numerical method for the Cahn–Hilliard equation with degenerate mobility and logarithmic potential
	12:10–12:30	**Avijit Sarkar (University of Kalyani)**: On Prey-Predator Dynamics With Hunting Cooperation Among Predators And Allee Effect In Preys
12:40 – 14:00	**Lunch**	
Chair: Joscha Gedicke	**14:00 – 14:35**	**Thomas Wick (Uni Hannover)**
	Title	*Multigoal-oriented error estimation and adaptivity for coupled problems*
	14:40 – 15:15	**Thomas Richter(University of Magdeburg)**
	Title	*Numerics of fluid-rigid body interactions*
15:20 – 15:40	**Coffee/Tea break**	
Chair: Aekta Aggarwal	**15:40 – 17:00**	Numerical Methods for Hyperbolic Conservation Laws - 2(4 talks, Room: LHC 105- G N Ramachandran)
	17:00–17:30	Aekta Aggarwal (IIM Indore): Nonlocal Conservation Laws, Modelling Traffic Flow and Crowd Dynamics
	17:30–17:50	**Rahul Barthwal (University of Stuttgart)**: On a Generalized Riemann problem solver for a rich hyperbolic system
	17:50–18:10	**Sujoy Basak (Indian Institute of Technology Delhi)**: Bound preserving Lax-Wendroff flux reconstruction method for special relativistic hydrodynamics
	18:10–18:30	**Sudipta Sahu (Indian Institute of Petroleum and Energy, Visakhapatnam, Andhra Pradesh)**: IMEX second order central scheme for discrete velocity kinetic models
Chair: Konduri Aditya	**15:40 – 17:00**	From Theory to Computation: FEM and DG Methods for Multiphysics Problems - 1 (4 talks, Room: LHC 103- Kaumudi)
	17:00–17:30	Konduri Aditya (IISc Bengaluru): Scalable asynchrony-tolerant numerical fluxes for DG solvers
	17:30–17:50	**Surabhi Rathore (SISSA, Trieste, Italy)**: Stabilised Galerkin-FE Approximations with POD-ROM for Real-Time Cardiovascular Flow Simulation
	17:50–18:10	**Kedar Wagh (Indian Institute of Science, Bangalore)**: A kinetic energy preserving discontinuous Galerkin scheme based on discrete kinetic model
	18:10–18:30	**Gautam Singh (National Institute of Technology Tiruchirappalli)**: Direct Discontinuous Galerkin Method for Singularly Perturbed Problems
Chair: Sarvesh Kumar	**15:40 – 17:00**	Recent Developments on Virtual Element Methods - 1 (4 talks, Room: LHC 106- P C Ray)
	17:00–17:30	Sarvesh Kumar (IIST Thiruvananthapuram): Three and four fields mixed formulations for poroelasticity
	17:30–17:50	**Ankit Kumar (BITS Pilani, Pilani Campus)**: Convergence analysis of the mixed virtual element methods for the Sobolev equation with convection
	17:50–18:10	**Nitesh Verma (Universidad del Bio-Bio, Concepcion, Chile)**: A Virtual Element Method for the Biot–Brinkman Equations Using Nitsche's Technique
	18:10–18:30	**Aswini.N.K (Indian Institute of Space Science and Technology, Thiruvananthapuram.)**: DGVEM for Parabolic Problems
Chair: Gopikrishnan	**15:40 – 17:00**	Optimal control of PDEs - 1 (4 talks, Room: LHC 107- S Ramanujan)
	17:00–17:30	Gopikrishnan C (IIT Palakkad): Semi and fully discrete analysis of extended Fisher–Kolmogorov equation with nonstandard FEMs for space discretization
	17:30–17:50	**Himani Roul (IISER Thiruvananthapuram)**: Analysis of Sparse Control in Heart Tissue Dynamics Using Gradient-Driven Functionals

	17:50–18:10	**Ankur Upadhyay (IISER Thiruvananthapuram)**: Non-smooth Time-Space Control-Constrained Optimal Control Problem in a Cardiac Electrophysiology Model
	18:10–18:30	**Maria Robert (National Institute of Technology, Calicut)**: A Lagrange multiplier approach to optimal control of the monodomain model
19:30	**Conference Dinner at VFR**	

SCHEDULE | WEDNESDAY, DECEMBER 10 (LHC - KAUMUDI)

08:30 – 09.00	**Registration**	
Chair: Thirupathi Gudi	**09:00 – 09:35**	**Hartwig Anzt (TU Munich)**
	Title	*Mixed Feeling about Mixed Precision: Can we adapt Numerical Algorithms to AI Hardware?*
	09:40 – 10:15	**G D V Gowda (TIFR-CAM Bengaluru & Mahindra University)**
	Title	*A convergent MUSCL-Hancock Scheme for Non-Local Conservation Laws*
	10:20 – 10:55	**Joscha Gedicke (Uni Bonn)**
	Title	*P_1 and SIP Discretizations for Elliptic Optimal Control with Pointwise State Constraints*
11:00 – 11:20	**Coffee/Tea break**	
Chair: Phani Motamarri	**11:20 – 12:40**	HPC/Scientific Machine Learning - 4 (4 talks, Room: LHC 103- Kaumudi)
	11:20–11:40	**Mohd Vaseem (BML Munjal University Gurugram, Haryana)**: Wavelet-Based Pinn For Micropolar Mepcm Flow Over Paraboloidal Surface
	11:40–12:00	**Jain M Francis (National Institute of Technology Karnataka)**: Capturing Shocks In Weakly Hyperbolic Systems Using Physics-Informed Neural Network Framework
	12:00–12:20	**Geetanjli (IIT jodhpur Rajasthan)**: Computation Of Waveguide Eigenmodes By Physics-Informed Neural Networks
	12:20–12:40	**Mahipal Jetta (Mahindra University)**: On A Fractional Telegraph-Diffusion Model For Image Denoising
Chair: Aditya Konduri	**11:20 – 12:40**	From Theory to Computation: FEM and DG Methods for Multiphysics Problems - 2 (4 talks, Room: LHC 105- G N Ramachandran)
	11:20–11:40	**Aniruddha Seal (IISc, Bengaluru)**: C0 Interior Penalty Method For Time-Fractional Cahn-Hilliard Equation
	11:40–12:00	**Manika Bag (IISER TVM)**: Well-Posedness Of Three-Dimensional Damped Cahn-Hilliard-Navier-Stokes Equations
	12:00–12:20	**Suraj Kumar (IIT Guwahati)**: A Dimensional-Splitting Non-Symmetric Interior Penalty Galerkin Method For 2D Singularly Perturbed Degenerate Parabolic Problems
	12:20–12:40	**Aditi Tomar (IIT Gandhinagar)**: IMEX-Alikhanov-FEM for time-fractional PDEs/PIDEs
Chair: Sarvesh Kumar	**11:20 – 12:40**	Recent Developments on Virtual Element Methods - 2 (4 talks, Room: LHC 106- P C Ray)
	11:20–11:40	**Ankur (SISSA, Trieste, Italy)**: A Virtual Element Framework for Modified Poisson–Nernst–Planck–Navier–Stokes of Room-Temperature Ionic Liquids
	11:40–12:00	**Priyal Garg (IIT Bhubaneswar)**: A Meshless Hybrid Approach To The Navier–Stokes Equations
	12:00–12:20	**Ambit Kumar Pany (Institute of Mathematics and Applications)**: Second order backward difference scheme combined with FEM for a 2D Sobolev equation with Burgers' type non-linearity
	12:20–12:40	**Shantanu (Birla Institute of Technology And Science, Pilani, Pilani Campus)**: Time-Fractional Smoluchowski Coagulation Equation : Analytical Study
Chair: Gopikrishnan	**11:20 – 12:40**	Optimal control of PDEs - 2 (4 talks, Room: LHC 107- S Ramanujan)
	11:20–11:40	**Pratibha Shakya (Indian Institute of Science)**: Finite Element Method For Parabolic Optimal Control Problem With A Bilinear State Equation
	11:40–12:00	**Soundarya G (PSG College of Technology, Coimbatore)**: Uncertainty-Aware Modeling And Optimal Control Of Ransomware Propagation

	12:00–12:20	**Hemaleka A (PSG College of Technology, Coimbatore.)**: Optimal Control Analysis Of A Fractional-Order Tuberculosis Model With Age-Structured Population
	12:20–12:40	**Bhargav Kumar K (Birla Institute of Technology and Science - Pilani, Hyderabad Campus)**: Optimal Control Of Renewal Equation With Generic Cost Functional
Chair: Arun K R	**11:20 – 12:40**	From Algorithms to Applications: Numerical Methods for PDEs - 4 (4 talks, Room: LHC 108- C V Raman)
	11:20–11:40	**Richa Singh (IIT BHU)**: Fast Higher Order Approximations For A Nonlinear Time-Fractional Biharmonic Equation With Initial Singularity
	11:40–12:00	**Mohammad Saif (Jamia Millia Islamia, New Delhi)**: A Fixed-Point Iterative Method for Solving Fractional Order Boundary Value Problems
	12:00–12:20	**Sumit Kumar (Indian Institute of Technology Guwahati)**: Investigating Secondary And Tertiary Vortex Phenomena in Flow Past a Circular Cylinder using Explicit RK-Type HOC Methods
	12:20–12:40	**Himanshu Kumar Dwivedi (Indian Institute of Technology(BHU), Varanasi)**: A Novel Fast Second Order Approach with High-Order Compact Difference Scheme and its Analysis for the Tempered Fractional Burgers Equation
12:40 – 14:00	**Lunch**	
Chair: Martin Falcke	**14:00 – 14:35**	**Gernot Plank (Medical University of Graz)**
	Title	*Computational Models of Cardiac Function - Closing the Gaps between Virtual and Physical Reality*
	14:40 – 15:15	**Phani Motamarri (IISc Bangalore)**
	Title	*A subspace iteration eigensolver tolerant to approximate matrix-vector products: Applications to quantum modelling of materials in the exascale era*
15:20 – 16:20	**Poster session/ Coffee/Tea break**	
Chair: Thomas Richter	**16:20 – 16:55**	**Moritz Hauck (Karlsruhe Institute of Technology)**
	Title	*Iterative solution of Timoshenko beam network models*
Chair: Phani Motamarri	**17:00 – 18:40**	HPC/Scientific Machine Learning - 5 (5 talks, Room: LHC 103- Kaumudi)
	17:00–17:20	**Raghvendra Pratap Singh (National Institute of Technology Kurukshetra, Haryana)**: Boundary Layer Physics-Informed Neural Networks For A Class Of Singularly Perturbed Fredholm Integro-Differential Equations
	17:20–17:40	**Pavan Patel (SVNIT SURAT)**: Data-Driven Recovery Of Longitudinal Dispersion Parameters Via Inverse Physics-Informed Neural Networks
	17:40–18:00	**Subhajit Sanfui (Siemens Technology and Services Pvt. Ltd.)**: Towards Accelerated ODE Solvers on GPU for Industrial Applications
	18:00–18:20	**Chetan Singh (Indian Institute Of Technology Delhi)**: Chew, Goldberger & Low Equations: Eigensystem Analysis And Applications To One-Dimensional Test Problems
	18:20–18:40	**Maneesh Kumar Singh (Imperial College London)**: A New Paradigm For Data Assimilation: The Global Girsanov Nudged Particle Filter
Chair: Mahipal Jetta	**17:00 – 18:40**	Recent Advances in PDEs, Modelling, and Applied Analysis - 1 (5 talks, Room: LHC 107- S Ramanujan)
	17:00–17:20	**Nitin Kumar (Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Italy)**: Bifurcation Curve Detection With Deflation For Multi-Parametric PDEs
	17:20–17:40	**Radadiya Hardikkumar Sureshbhai (Sardar vallabhbhai national institute of technology -Surat)**: 2-Stage 4-Dimensional Fuzzy Stochastic Multi-Objective Transportation Problem and its solution by Random Loop-Based Non-Dominated Sorting Evolutionary Algorithm
	17:40–18:00	**Kannan R (Indian Institute Of Technology Guwahati.)**: The Distance To Bounded Realness

	18:00–18:20	**Vivek Subhedar Pathak (Visvesvaraya National Institute of Technology Nagpur)**: A high-order numerical method and its analysis for solving a 3D time-fractional advection–diffusion model
	18:20–18:40	**Nivedita (Indian Institute of Technology Mandi)**: Existence And Uniqueness Of Identification Problem For Different Kinds Of Abstract Differential Equations Using Perturbation Of Linear Operators
Chair: Suresh Kumar	**17:00 – 18:50**	Numerical Frontiers in Fluid Dynamics and Flow Simulation - 1 (5 talks, Room: LHC 106- P C Ray)
	17:00–17:20	**Rakib Mondal (Birla Institute of Technology and Science, Pilani, K K Birla Goa Campus)**: Existence And Uniqueness Of C^1 Solution to the BVP for Blood Flow Model with Body Forces
	17:20–17:40	**Priyanshu Agrahari (National Institute of Technology Warangal)**: Influence of Viscous Dissipation on Double-Diffusive Convection: Linear and Nonlinear Stability in a Couple-Stress Fluid-Saturated Porous Layer
	17:40–18:00	**Shweta (Birla Institute of Technology And Science, Pilani, Pilani Campus)**: Analytical Study of the Continuous Redner-Ben-Avraham-Kahng Coagulating Cluster Dynamic Model
	18:00–18:20	**Vivek Lodwal (National Institute of Technology, Warangal)**: Heat And Mass Transfer Enhancement Of Convection Driven by Thermal And Solutal Buoyancy Under Concentration Modulation
	18:20–18:40	Ritesh Kumar Dubey (SRMIST Chennai): Data Driven Weno Schemes For Hyperbolic Conservation Laws
Chair: Biswarup Biswas	**17:10 – 18:50**	Numerical Methods for Hyperbolic Conservation Laws - 3 (5 talks, Room: LHC 105- G N Ramachandran)
	17:00–17:20	**Rakesh Kumar (Mahindra University)**: Higher Order Accurate Numerical Schemes For Hyperbolic Conservation Laws
	17:20–17:40	**Asha Kumari Meena (Central University of Rajasthan)**: Robust Numerical Schemes For Two-Fluid Ten-Moment Plasma Flow Equations
	17:40–18:00	**Deepak Bhoriya (Department of Mathmatics, BITS Pilani, Pilani Campus, Rajasthan.)**: Entropy Stable ADer-DG (Arbitrary High-Order Derivative - Discontinuous Galerkin) Scheme For Conservation Laws
	18:00–18:20	**Biswarup Biswas (Mahindra University)**: Limiter Based Entropy Stable Weno Schemes For Relativistic Hydrodynamic Equations
19:30	**Dinner at VFR**	

SCHEDULE | THURSDAY, DECEMBER 11 (LHC - KAUMUDI)

08:30 – 09.00	**Registration**	
Chair: Martin Weiser	**09:00 – 09:35**	**Sandra May (TU Berlin)**
	Title	*The DoD Stabilization to solve the small cell problem*
	09:40 – 10:15	**Thirupathi Gudi (IISc Bengaluru)**
	Title	*C0-IP methods for optimal control problems governed by the PDEs in nondivergence form: Formulations and Approximations.*
10:20 – 10:40	**Coffee/Tea break**	
Chair: Deepjyoti Goswami	**10:40 – 12:40**	Recent Advances in Numerical Methods for Newtonian and Viscoelastic Fluid Models - 4: Topic (4 talks, Room: LHC 105- G N Ramachandran)
	10:40–11:00	**Ruthra J S (SRM Institute of Science and Technology Kattankulathur)**: Buoyancy Driven Convection In A Partially Open C-Shaped Enclosure Filled With A Nanofluid
	11:00–11:20	**Om Prakash Meena (Jawaharlal Nehru University (JNU) New Delhi-110067.)**: Magnetic And Joule Heating Effects On Mixed Convection Flow Across A Vertical Cone
	11:20–11:40	**Angel Priya E (SRM Institute of Science and Technology)**: MHD Darcy–Forchheimer Flow with Chemical Reaction along a Stretching Sheet.
	11:40–12:00	**Sheetal (Malaviya National Institute of Technology Jaipur)**: Direct Numerical Simulation Of Plane Poiseuille Flow Of A Viscoplastic Fluid In A Channel With Hydrophobic Wavy Walls
	12:00–12:20	**Subrahamanyam Upadhyay (Indian Naval Academy)**: Wavelet Collocation Method Applied To Study Bioheat Transfer In Skin Tissue
Chair: Aditya Konduri	**10:40 – 12:40**	From Theory to Computation: FEM and DG Methods for Multiphysics Problems - 3 (4 talks, Room: LHC 106- P C Ray)
	10:40–11:00	**Rishi Das (IIT Bombay & Monash University, Australia)**: Darcy-Forchheimer Equations : Robust Stability And Preconditioning
	11:00–11:20	**Kanchan Dwivedi (National Institute of Technology Warangal)**: Large Time Asymptotics For The Viscous Burgers Equation Under Impulsive Forcing
	11:20–11:40	**Nikhil Kodali (Indian Institute of Science, Bengalaru)**: Residual-Based Chebyshev Filtered Subspace Iteration For Sparse Hermitian Eigenvalue Problems Tolerant To Inexact Matrix-Vector Products
	11:40–12:00	**Gopika P B (IISER Thiruvananthapuram)**: Novel Bidomain Partitioned Strategies For The Simulation Of Ventricular Fibrillation Dynamics
	12:00–12:20	**Anoja Vijay (Digital University Kerala)**: Finite Element Method For Two-Phase Flow Using Volume Of Fluid Method With Stabilization Techniques
	12:20–12:40	**Gourab Panigrahi (Indian Institute of Science)**: Matrix-Free Algorithms For Fast Electronic Structure Calculations On Distributed Architectures Using Finite-Element Discretization
Chair: Sheetal Dharmatti	**10:40 – 12:40**	Numerical Frontiers in Fluid Dynamics and Flow Simulation - 2 (4 talks, Room: LHC 103- Kaumudi)
	10:40–11:00	**Dipti Ranjan Parida (TIFR Centre For Applicable Mathematics, Bangalore)**: Novel Mathematical Models Capture Energy Transfer Patterns In Wave Turbulence
	11:00–11:20	**Devika Jayan (CHRIST(Deemed to be University),Bangalore)**: Effect Of Temperature Modulation On Salt-Finger Convection In Micropolar Liquids
	11:20–11:40	**Sukdeb Manna (SRM University AP)**: A Mathematical Approach To Precision Therapeutics For Cholesterol Regulation
	11:40–12:00	**Sukhendu Das Adhikary (Visva-Bharati (A Central University))**: Turbulence Of Thermoacoustic Internal Gravity Waves In The Lower Atmosphere Through Pde Modelling And Simulation.

	12:00–12:20	**Manisha Jangir (National Institute of Technology, Warangal)**: Magneto-Convection In Anisotropic Non-Darcy Porous Media With Non-Uniform Boundary Heating And Internal Heat Generation
	12:20–12:40	**Akhilesh Yadav (Banaras Hindu University)**: Almost Ricci Solitons On Weakly Ricci Symmetric Perfect Fluid Spacetime.
Chair: Rajan M P	**10:40 – 12:40**	Recent Advances in PDEs, Modelling, and Applied Analysis - 2 (4 talks, Room: LHC 107- S Ramanujan)
	10:40–11:00	**Panchal Vijaykumar Amrutlal (Sardar Vallabhbhai National Institute of Technology Surat Gujarat India)**: Bi-Objective Optimization In Non-Markovian Finite-Capacity Retrial Queue Models With N-Policy
	11:00–11:20	**Utsavkumar Dhansukhbhai Patel (Sardar Vallabhbhai National Institute of Technology, Surat)**: Review On Mathematical Model For Permeable Reactive Barrier To Contain Volatile Organic Compound Remediation.
	11:20–11:40	**Monalisa Anand (UPES Dehradun)**: Influence of Incubation Delays on Covid-19 Transmission in Diabetic and Non-Diabetic Populations
	11:40–12:00	**Rakesh Kumar Meena (School of Physical Sciences, Jawaharlal Nehru University, New Delhi)**: Metaheuristic Optimization And Fuzzy Modelling For M/G/1 Fault-Tolerant Machining System With Vacation
	12:00–12:20	**Buddhadev Pal (Banaras Hindu University)**: Almost Ricci–Bourguignon Soliton On Warped Product Space
	12:20–12:40	**Anupam Priyadarshi (Department of Mathematics, Banaras Hindu University Varanasi)**: From Stability to Chaos: Fractional-Order Modeling of Intra-Guild Predation with Long-Term Ecological Memory
12:40 – 13:50	**Lunch**	
Chair: Mahipal Jetta	**13:50 – 14:50**	Recent Advances in PDEs, Modelling, and Applied Analysis - 3 (5 talks, Room: LHC 106- P C Ray)
	13:50–14:10	**V Umapathi (Department of Mathematics, Bharathiar University.)**: Existence And Stability Results For Impulsive Fractional Integrodifferential Equations Involving The Hadamard Derivative In Sobolev Spaces
	14:10–14:30	**Kanailal Mahato (Banaras Hindu University)**: Composition Of Pseudo-Differential Operators Via Coupled Fractional Fourier Transform
	14:30–14:50	**Jyotiranjan Nayak (SRM University, AP.)**: A Comparative Analysis Of Quadrilateral And Triangular Finite Elements In SIMP-Based Topology Optimization.
Chair: Rakesh Kumar	**13:50 – 14:50**	A Posteriori Error Analysis and Adaptive FEM - 3 (5 talks, Room: LHC 105- G N Ramachandran)
	13:50–14:10	**Evana Islam Sarkar (IIT Bhubaneswar)**: Finite Element Analysis Of The 3-D Mhd System With P-Laplacian
	14:10–14:30	**Priyanka (Indian Institute of Technology (BHU), Varanasi)**: Error Analysis Of A Fast ADI Compact Finite Difference Method For Two-Dimensional Semi-Linear Time-Fractional Problem With Weak Initial Singularity
	14:30–14:50	**Nitin (IIT BHU (Varanasi))**: A high order numerical method for solving parabolic degenerate convection-diffusion singularly perturbed problem on the Bakhvalov-type meshes
Chair: Biswarup Biswas	**13:50 – 14:50**	Numerical Frontiers in Fluid Dynamics and Flow Simulation - 3 (5 talks, Room: LHC 103- Kaumudi)
	13:50–14:10	**Pratham Singh (Indian Institute of Technology Guwahati)**: Coherent Structure Dynamics Of Heat Transfer In Wakes Of An Inclined Elliptical Cylinder: A Novel Lagrangian Framework
	14:10–14:30	**Prashant Kumar Vishwakarma (indian institute of science bangalore)**: A Bi-Slope Linear Distribution Function-Based Boltzmann Scheme For Fluid Flows
	14:30–14:50	**Aiswarya R Iyer (CHRIST (Deemed to be University))**: Asymptotic Dispersion Behaviour Of Contaminants In Heterogeneous Groundwater Systems Under Directional Inlet Regime

Chair: Suresh Kumar	**13:50 – 14:50**	Recent Advances in PDEs, Modelling, and Applied Analysis - 4 (5 talks, Room: LHC 107- S Ramanujan)
	13:50–14:10	**Aditya Bhattacharya (Amity University, Kolkata)**: Determining Effectiveness Of Treatment Measures In Controlling Dengue Outbreaks Using Optimal Control
	14:10–14:30	**Pardeep Kumar (Indraprastha College for Women, University of Delhi)**: Chaos-Control Of Nanoparticles Transport In Tumors
	14:30–14:50	**Sameer Nitin Khandagale (VNIT)**: A High-Order Numerical Scheme Based On L2-1_Σ-ADI Difference Method On Nonuniform Meshes For A 2D Variable Coefficients Time Fractional Reaction-Diffusion Equation
Chair: Sandra May	**14:50 – 15:25**	**Christian Engwer (University of Munster)**
	Title	*Efficient simulation and discretization methods for brain source analysis*
	15:30 – 16:05	**Volker John (WIAS Berlin)**
	Title	*Some experiences in using ML techniques for the numerical solution of PDEs*
16:10 – 16:20	**Closing Remarks**	
16:20	**High Tea**	