



### Schedule of Events

Day #1 (Sep 06, 2022)		
Time	Registration & Inaugural, Venue: Auditorium	
08:30am-9:15am	Registration (Registration Desk)	
09:15am-10:00am	Opening Ceremony	
10:00am-10:20am	High Tea (Auditorium Foyer)	
Session-I	Chair: Prof. Amiya K. Pani, Venue: GBL-01	
10:30am-11:15pm	Francois Golse, Frederic Hecht, <u>Olivier Pironneau</u> , Pierre-Henri Tournier and Didier Smetz (PT1) (Title: Numerical Methods for the Radiative Transfer Equations for the Atmosphere)	
Session-II	Chair: Prof. Carsten Carstensen, Venue: GBL-01	
11:15am-12:00pm	Prof. Daniele Boffi (PT2) (Title: On the coupling of fluids and solids)	
Session-III	PS-I Chair: Prof. Prabha Sharma, Venue: HUB-A	PS-II Chair: Prof. C.S. Upadhyay, Venue: HUB-B
12:00pm-12:30pm	Prof. Rajen Sinha (IT1) (Title: Local a posteriori error estimates for boundary control problems governed by nonlinear parabolic equations)	Prof. Zhi Zhou (IT2) (Title: Numerical analysis of diffusion coefficient identification for elliptic and parabolic systems)
12:30pm-1:00pm	Prof. Thirupati Gudi (IT3) (Title: Dirichlet boundary optimal control problem: Energy space formulation and approximation)	Prof. Buyang Li (IT4) (Title: Exponential convolution quadrature for nonlinear subdiffusion equations with nonsmooth initial data)
01:00pm-02:00pm	Lunch Break (E2 Cafeteria)	
Session-IV	Industry Session, Chair: Prof. A.K. Prasada Rao, Venue: GBL-01	
02:00pm-02:15pm	Mr. Nagendra Naram (American Towers Corporation)	
02:15pm-02:30pm	Mr. Devavrat Walinjkar (CAIRN India, Oil & Gas Division of Vedanta Group)	
02:30pm-02:45pm	Mr. Vikrant Singh (BatX Energies)	

02:45pm-03:00pm	Mr. Nagesh A.S. (Hero Electric)	
Session-V	PS-I, Chair: Prof. Rathish Kumar, Venue: HUB-A	PS-II, Chair: Prof. Asha Kisan Dond, Venue: HUB-B
03:00pm-03:30pm	Prof. Malay Banejee (IT5) (Title: Numerical detection of bifurcations of spatio-temporal patterns)	Prof. Aekta Aggarwal (IT6) (Title: Recent results in numerical approximations of hyperbolic systems)
03:30pm-03:45pm	Tea/Coffee Break (HUB Foyer)	
Session-VI	Special Session (In honor of Prof. A.K. Pani & Prof. Carsten Carstensen) Chair: Prof. Neela Nataraj, Venue: GBL-01	
03:45pm-04:30pm	Prof. A.K. Pani (PT3) (Title: Global stabilization of the Viscous Burgers' equation by nonlinear Neumann boundary feedback control: Theory and finite element analysis)	
04:30pm-05:15pm	Prof. Carsten Carstensen (PT4) (Title: Towards adaptive hybrid high-order methods (HHO))	
05:15pm-07:00pm	Session for honoring/wishing Prof. A.K. Pani & Prof. Carsten Carstensen	
Conference Dinner (07:30pm-9:30pm), Venue: Red Fox Hotel, Bhiwadi		
Day #2 (Sep 07, 2022)		
Session-I	Chair: Prof. Daniele Boffi, Venue: GBL-01	
09:00am-09:45am	Prof. E.J. Park (PT5) (Title: Polygonal staggered Galerkin methods)	
Session-II	Chair: Prof. S. Sundar, Venue: GBL-01	
09:45am-10:30am	Prof. C.S. Upadhyay (PT6) (Title: Experiences with multi-scale modeling of the thermo-inelastic response of composite materials)	
Session-III	PS-I, Chair: Prof. Thirupati Gudi, Venue: HUB-A	PS-II, Chair: Prof. Malay Banerjee, Venue: HUB-B
10:30am-11:00am	Prof. Michele Ruggeri (IT7) (Title: Numerical methods for inertial spin dynamics in ferromagnets and antiferromagnets)	Prof. Utpal Manna (IT8) (Title: Wong-Zakai approximations in micromagnetism)
11:00am-11:30am	Prof. Heiko Gimperlin (IT9) (Title: NA)	Prof. Apala Majumdar (IT10) (Title: Solution landscapes for nematic liquid crystals with elastic anisotropy in two dimensions)

11:30am-11:40am	Tea/Coffee Break (HUB Foyer)		
Session-IV	Chair: Prof. Rajen K. Sinha, Venue: GBL-01		
11:40am-12:25pm	Prof. S. Sundar (PT7) (Title: Modelling pedestrian crowd dynamics and interaction with obstacles)		
Session-V	PS-I, Chair: Prof. Daniele Boffi, Venue: HUB-A	PS-II, Chair: Prof. Apala Majumdar, Venue: HUB-B	
12:25pm-12:55pm	Prof. Ruiz Bair (IT11) (Title: Mixed formulations for poroelasticity/free flow using total pressure)	Prof. Imran Biswas (IT12) (Title: Stochastic conservation laws with Poisson noise: Regularity and stability of sample paths of entropy solutions)	
12:55pm-01:25pm	Prof. Dietmar Gallistl (IT13) (Title: Convergence of a regularized finite element discretization of the two-dimensional Monge–Ampere equation)	Prof. Harish Kumar (IT14) (Title: High-order finite-difference entropy stable schemes for two-fluid relativistic plasma flow equations)	
01:25pm-02:15pm	Lunch Break (E2 Cafeteria)		
Session-VI	Chair: Prof. Michele Ruggeri, Venue: GBL-01		
02:15pm-03:00pm	Prof. Rathish Kumar (PT8) (Title: PDE Based Image Analysis: Theory, Computation and Application)		
Session-VII	PS-I, Chair: Prof. Arbaz Khan, Venue: HUB-A	PS-II, Chair: Prof. Utpal Manna, Venue: Hub-B	PS-III, Chair: Prof. Harsha Hutridurga, Venue: HUB-C
03:00pm-03:20pm	Prof. Dhanumjaya Palla (ET1) (Title: Orthogonal spline collocation method for two-dimensional Helmholtz problems with interfaces)	Prof. Anil K. Pundir (ET2) (Title: Virtual element methods for optimal control problems involving elliptic partial differential equations)	Prof. Sarvesh Kumar (ET3) (Title: Three and four fields mixed formulations in poroelasticity)
03:20pm-03:40pm	Prof. Lokpati Tripathi (ET4) (Title: An $H^1$ -Galerkin mixed FEM for time fractional partial differential equations with an application to finance)	Prof. Asha Dond Kisan (ET5) (Title: A posteriori error analysis for a distributed optimal control problem governed by the Von Karman equation)	Prof. Saumya Bajpai (ET6) (Title: Finite element analysis of a discontinuous Galerkin method for the Kelvin-Voigt viscoelastic flow model)
03:40pm-04:00pm	Tea/Coffee Break (HUB Foyer)		
Session-VIII	Chair: Prof. Olivier Pironneau, Venue: GBL-01		

04:00pm-04:45pm	Prof. M. Vanninathan (PT9) (Title: Macro dispersion coefficients)		
Session-IX	Industry Session, Chair: Prof. A.K. Prasada Rao, Venue: GBL-01		
04:45pm-05:00pm	Mr. Manu J. Nair (EtherealX)		
Session-X	PS-I, Chair: Prof. Neela Nataraj, Venue: HUB-A	PS-II, Chair: Prof. Harsha Hutridurga, Venue: HUB-B	PS-III, Chair: Dr. Subhashree Mohapatra, Venue: HUB-C
05:00pm-05:15pm	Mr. Benedikt Gräßle HU (CT1) (Title: Stabilization-free reliable and efficient a posteriori error control for HHO)	Mr. James Dalby (CT2) (Title: One-dimensional ferronematics in a channel: order reconstruction, bifurcations and multistability)	Mr. Kallol Ray (CT3) (Title: A three step two-grid method for discontinuous Galerkin approximations to the time-dependent incompressible Navier-Stokes equations)
05:15pm-05:30pm	Mr. Sandip Maji (CT4) (Title: An efficient numerical method for Caputo time-fractional integro-differential equation)	Mr. Wasim Akram (CT5) (Title: Feedback stabilization of a parabolic coupled system and its numerical study)	Mr. Jai Tushar (CT6) (Title: Virtual element methods for general linear elliptic interface problems on polygonal meshes with small edges)
05:30pm-05:45pm	Ms. Aliya Kazmi (CT7) (Title: Least-squares spectral element preconditioners for elliptic boundary layer problems)	Dr. Bishnu Ghosh (CT8) (Title: A novel numerical scheme for 2D quasi-linear hyperbolic equation on an irrational domain: Application to uniform transmission line equation)	Dr. S. Karthikeyan (CT9) (Title: Lie group analysis of the effects of radiation on free convective heat and mass transfer flow upon an inclined stretched surface)
Session-XI	Chair: Prof. Rathish Kumar, Venue: GBL-01		
05:45pm-06:30pm	Prof. Graeme Fairweather (PT10) (Title: The reformulation and numerical solution of some nonclassical boundary value problems and initial/boundary value problems)		
Session-XII	Chair: Prof. Arbaz Khan, Venue: GBL-01		
06:30pm-07:00pm	Prof. David Mora H. (IT15) (Title: A virtual element method for problems in fluid mechanics)		
Cultural Program (BMU Student Clubs) (07:00pm-8:00pm)			
Dinner (E2 Cafeteria) (08:00pm-09:30pm)			
Day #3 (Sep 08, 2022)			
Session-I	Chair: Prof. Thirupati Gudi, Venue: HUB-A		

09:00am-09:45am	Prof. G.P. Raja Sekhar (PT11) (Title: Mathematical modeling of multi-phase flow models in oil reservoirs)		
Session-II	Chair: Prof. Utpal Manna, Venue: GBL-01		
09:45am-10:30am	Prof. Zhonghua Qiao (PT12) (Title: Energy stability and error analysis of a maximum bound principle preserving scheme for the dynamical Ginzburg-Landau equations of Super conductivity)		
Session-III	PS-I, Chair: Prof. Lokpati Tripathi, Venue: HUB-A		PS-II, Chair: Prof. Saumya Bajpai, Venue: HUB-B
10:30am-11:00am	Prof. Harsha Hutridurga (IT16) (Title: Convergence to equilibrium in degenerate systems)	Arbaz Khan (IT17) (Title: Stochastic Mixed Finite element approximation for linear elasticity with uncertain inputs)	
Session-IV	PS-I, Chair: Prof. Sarvesh Kumar, Venue: HUB-A	PS-II, Chair: Prof. Aekta Aggarwal, Venue: Hub-B	PS-III, Chair: Dr. Subhashree M., Venue: HUB-C
11:00am-11:20am	Prof. Ajit Patel (ET7) (Title: Primal hybrid method for quasilinear parabolic problems)	Dr. Rekha Khot (ET8) (Title: Nonconforming virtual elements for the biharmonic equation with Morley degrees of freedom on polygonal meshes)	Prof. Deepjyoti Goswami (ET9) (Title: Discontinuous Galerkin finite element error analysis for Oldroyd model of order one)
11:20am-11:40am	Prof. Sangita Yadav (ET10) (Title: HDG method for non-linear Klein-Gordon equations)	Prof. Gaddam Sharat (ET11) (Title: A $C^0$ interior penalty method for the von Karman obstacle problem)	Dr. Avijit Das (ET12) (Title: An efficient DWR-type a posteriori error bound of SDFEM for singularly perturbed convection-diffusion PDEs)
11:40am-12:00pm	Tea/Coffee Break (HUB Foyer)		
Session-V	Chair: Prof. Carsten Carstensen, Venue: GBL-01		
12:00pm-12:45pm	Prof. Alexandre Ern (PT13) (Title: Hybrid high-order methods for the biharmonic problem)		
Session-VI	PS-I, Chair: Prof. Michele Ruggeri, Venue: HUB-A		PS-II, Chair: Prof. Harish Kumar, Venue: HUB-B
12:45pm-1:15pm	Prof. Muslim Malik (IT18) (Title: Singular switched dynamic system on non-uniform time domain)	Dr. Akhlaq Husain (Title: Spectral element methods for 3D elliptic problems on non-smooth domains)	
01:15pm-02:00pm	Lunch Break (E2 Cafeteria)		

Session-VII	PS-I, Chair: Prof. Neela Nataraj, Venue: HUB-A	PS-II, Chair: Dr. Anil K. Pundir, Venue: HUB-B	PS-III, Chair: Dr. Dhanumjaya P., Venue: HUB-C
02:00pm-02:15pm	Mr. Joydev Haldar (CT10) (Title: A stable scheme to McKendrick-Von Foerster equation with diffusion)	Mr. Pradeep Sahu (CT11) (Title: Modified wave numbers for fractional derivatives)	Mr. Krishan Kumar (ET12) (Title: Discontinuous Galerkin method for the Vlasov-Burgers equation)
02:15pm-02:30pm	Mr. Aniruddha Seal (CT13) (Title: Convergence analysis of a second-order scheme for fractional differential equations with integral boundary conditions)	Ms. Jaspreet Kaur (CT14) (Title: An efficient numerical method for time-fractional Black-Scholes equation arising in finance)	Ms. Neha Trivedi (CT15) (Title: Study of three collinear cracks in a composite medium)
02:30pm-02:45pm	Mr. Bikram Bir (CT16) (Title: A penalized finite element method for the Oldroyd model of order one)	Ms. Sushmita Anand (CT17) (Title: Solitary wave solutions of the Degasperis-Procesi equation via Lie symmetry approach)	Ms. Jyoti Yadav (CT18) (Title: An approximate analytical approach of generalized Boussinesq equation by variational iteration method)
02:45pm-03:00pm	Ms. Garima Kakkar (CT19) (Title: Numerical method for 2D elliptical singularly perturbed problem with shifts of mixed type)	Mr. Tarun Sharma (CT20) (Title: Fractional Kirchhoff Hardy problems with weighted Choquard and singular nonlinearity)	Dr. Shantiram Mahata (ET13) (Title: Nonsmooth data optimal error estimates by energy arguments for subdiffusion equations with memory)
03:00pm-03:15pm	Mr. Swapnil Kale (CT21) (Title: Penalized domain embedding method to solve PDEs over curved domains with structured triangular mesh)	Ms. Jyoti Jaglan (CT22) ((Title: A new strong stability preserving multiderivative time marching method for stiff reaction diffusion systems)	
03:15pm-03:30pm	Tea/Coffee Break (HUB Foyer)		
Session-VIII	Chair: Convenors, Auditorium		
03:30pm-04:00pm	Closing Ceremony		

**Abbreviations:**

**PT:** Plenary Talk

**IT:** Invited Talk

**ET:** Exclusive Talk

**CT:** Contributed Talk