International Conference on Mathematical Modelling, Differential Equations, Scientific Computing & Applications

Conference Schedule

Day One (27-03-2016: Sunday)			
Venue: Outreach Auditorium		2:00 pm - 3:15 pm	Registration
		3:15 pm - 3:45 pm	Inaugural Function
		3:45 pm - 4:30 pm	High Tea
Technical Session 1	04:30pm-06:45pm	Venue: Outreach Auditorium	
Day Two (28-03-2016: Monday)			
Technical Session 2	09:00am-11:00am	Venue: Outreach Auditorium	
11:00am-11:30am Tea Break (Outreach Auditorium)			
Technical Session 3a	11:30am-01:00pm	Venue: PBCEA-A	Singularly Perturbed Problem and Scientific Computation
Technical Session 3b	11:30am-01:00pm	Venue: PBCEA-B	Singularly Perturbed Problem and Scientific Computation
Technical Session 3c	11:30am-01:00pm	Venue: PBCEA-C	Mathematical Modelling and Scientific Computation
Technical Session 3d	11:30am-01:00pm	Venue: Outreach Auditorium (seminar room)	Numerical Analysis and Scientific Computation
01:00pm-02:00pm Lunch Break (Visitor's Hostel Lawns)			
Technical Session 4a	02:00pm-04:00pm	Venue: PBCEA-A	Singularly Perturbed Problem and Scientific Computation
Technical Session 4b	02:00pm-04:00pm	Venue: PBCEA-B	Fractal Theory and Computation
Technical Session 4c	02:00pm-04:00pm	Venue: PBCEA-C	Mathematical Modelling and Scientific Computation

Technical Session 4d	02:00pm-04:00pm	Venue: Outreach Auditorium (seminar room)	Mathematical Modelling and Scientific Computation
04:00pm-04:30pm Tea Break (Outreach Auditorium)			
Technical Session 5	04:30pm-06:30pm	Venue: Outreach Auditorium	
06:30 pm – 07:30 pm (IAMMS Meeting)			
08:00 pm – 10:00 pm (Banquet)			
Day Three (29-03-2016: Tuesday)			
Technical Session 6	09:00am-11:00am	Venue: Outreach Auditorium	
11:00am-11:30am Tea Break (Outreach Auditorium)			
Technical Session 7a	11:30am-01:00pm	Venue: PBCEA-A	Singularly Perturbed Problem and Scientific Computation
Technical Session 7b	11:30am-01:00pm	Venue: PBCEA-B	Mathematical Modelling and Scientific Computation
Technical Session 7c	11:30am-01:00pm	Venue: PBCEA-C	Numerical Analysis and Scientific Computation
Technical Session 7d	11:30am-01:00pm	Venue: Outreach Auditorium (seminar room)	Numerical Analysis and Scientific Computation
01:00pm-02:00pm Lunch Break (Visitor's Hostel Lawns)			
Technical Session 8a	02:00pm-04:00pm	Venue: PBCEA-A	Singularly Perturbed Problem and Scientific Computation
Technical Session 8b	02:00pm-04:00pm	Venue: PBCEA-B	Numerical Analysis and Scientific Computation
Technical Session 8c	02:00pm-04:00pm	Venue: PBCEA-C	Mathematical Modelling and Scientific Computation
04:00pm-04:30pm Tea Break (Outreach Auditorium)			
Technical Session 9	04:30pm-05:15pm	Venue: Outreach Auditorium	
05:15pm-06:00pm Valedictory Function (Outreach Auditorium)			

Day One (27-03-2016: Sunday)				
Venue: **Outreach Auditorium**		02:00 pm - 03:15 pm	Registration	
		03:15 pm - 03:45 pm	Inaugural Function	
		03:45 pm - 04:30 pm	High Tea	
Technical Session 1				
Venue: **Outreach Auditorium**	Chairman: Prof. Jang Bahadur Shukla			
	Invited 1	04:30pm - 05:15pm	Prof. Carsten Cartensen Department of Mathematics Humboldt-Universität zu Berlin	Discontinuous Petrov-Galerkin methodology for second-order elliptic problems.
	Invited 2	05:15pm - 06:00pm	Prof. Mohan K Kadalbajoo Distinguished Professor Department of Mathematics LNMIIT Jaipur	An optimal error estimate of an IMEX finite element method for some partial integro-differential equations arising in finance.
	Invited 3	06:00pm - 06:45pm	Prof. G P Kapoor Professor and Dean, DIT University,Mussorie Diversion Road Dehradun	Inadequacy of Euclidean Calculus and Fractal Simulation of Objects in Nature
Day Two (28-03-2016: Monday)				
Technical Session 2				
Venue: **Outreach Auditorium**	Chairman: Prof. Mohan K Kadalbajoo			
	Invited 4	09:00am -0 9:45am	Prof. Relja Volanovic Department of Mathematical Science, Kent State University Stark North Canton, Ohio, USA	A Numerical Method for Stationary Shock Problems with Monotonic Solutions.

	Invited 5	9:45 am - 10:30 am	Prof. Amiya Pani Department of Mathematics, Indian Institute of Technology Bombay	Through eyes of viscoelastic fluids: How can external stimulus influence research in theoretical and computational PDEs ?
	Invited 6	10:30am - 11:00am	Prof. Sashikumaar Ganesan Dept. of Computational and Data Sciences, Indian Institute of Science Bangalore	ALE-SUPG finite element method for convection dominated problems in time-dependent domains.
11:00am-11:30am Tea Break (Outreach Auditorium)
Technical Session 3(a,b,c,d)(11:30 am-1:00 pm)
Tech Session 3a Venue: PBCEA-A		Chairman: Prof. A K Nandakumaran
	Invited 7	11:30am-12:00am	Prof Naresh Chadda School of Basic Sciences and Research, Sharda University, Greater Noida	Computational study to design a novel algorithm for solving advection-dominated time-dependent advection-diffusion problem.
	Invited 8	12:00am-12:30pm	Prof. Pramod Chakravarthy Department of Mathematics, VNIT Nagpur	Exponentially Fitted Methods for Singularly Perturbed Differential Difference Equations.
	Contributed 1	12:30pm-12:45pm	Dr. Sheo Kumar Dr. B. R. Ambedkar National Institute of Technology Jalandhar	Numerical approaches for solving Parabolic partial differential equations arising in engineering
	Contributed 2	12:45pm-01:00pm	Dr. Srikumar Panda Jadavpur University	A study on inviscid fluid flow over arbitrary bottom using nonlinear theory.

Tech Session 3b	Chairman: Prof. S Chandra Sekhara Rao			
Venue: PBCEA-B	Contributed 3	11:30am-11:45am	Abhishek Das IIT Gawahati	The parameter uniform numerical method for two-dimensional singularly Perturbed parabolic delay convection-diffusion problems on Shishkin mesh.
	Contributed 4	11:45am-12:00am	Anirban Majumdar IIT Gawahati	An ε-uniform Numerical Scheme for 2D Singularly Perturbed Elliptic Convection-Diffusion Problems with Discontinuous Source Term and Convection Coefficient.
	Contributed 5	12:00am-12:15pm	Maneesh Kumar Singh IIT Gawahati	Analysis of An Upwind Difference Scheme on Shishkin-type mesh For Singularly Perturbed System of Parabolic Convection-diffusion Equations.
	Contributed 6	12:15pm-12:30pm	Deepti Shakti Tripathi NIT Rourkela	Monotone hybrid scheme for singularly perturbed convection-diffusion problem on layer adapted meshes.
	Contributed 7	12:30pm-12:45pm	S. Dinesh Kumar VNIT Nagpur	Fourth order fitted operator numerical scheme for singularly perturbed reaction diffusion problems.

	Contributed 8	12:45pm-01:00pm	Sathyaseelan.D SASTRA University	Legendre wavelet method for a class of nonlinear and fractional order ship roll motion arising in ship dynamics.
Tech Session 3c Venue: PBCEA-C	Chairman: Prof. Prawal Sinha			
	Invited 9	11:30am-12:00am	Prof. Ram Naresh Department of Mathematics, Harcourt Butler Technological Institute Kanpur	Modeling the dynamics of dust scavenging from the near earth atmosphere.
	Invited 10	12:00am-12:30pm	Prof. Manju Agarwal Department of Mathematics & Astronomy, Lucknow University	Depletion and Conservation of Forestry Biomass: Mathematical Model.
	Contributed 9	12:30pm-12:45pm	Dr. Pragya Mishra Maharana Pratap Govt. P.G. College, Hardoi	Modelling and stability analysis of Swine Flu Transmission
	Contributed 10	12:45pm-01:00pm	Dr. Rachana Pathak Lucknow University	Modeling the Role of Industrialization on the Depletion of Forest Biomass of Resources and its Conservation by using Genetic Plantation
Tech Session 3d Venue: Outreach Auditorium	Chairman: Prof. Poosan Moopanar Muthu			
	Contributed 11	11:30am-11:45am	Geetanjali Chattopadhyay IIT Madras	Instabilities due to asymmetric reverse flow in a viscosity stratified plane Poiseuille flow.

(seminar room)	Contributed 12	11:45am-12:00am	Rajendra Choudhary IIT Indore	Stability Analysis of Bilinear Iterative Rational Krylov Algorithm.
	Contributed 13	12:00am-12:15pm	Navneet Pratap Singh IIT Indore	Preconditioned Iterative Solves in Model Reduction of Second Order Linear Dynamical Systems.
	Contributed 14	12:15pm-12:30pm	Pradeepa Teegala NIT Warangal	Nonlinear Convection Flow of a Micro polar Fluid under Convective Boundary Condition with Homogeneous-Heterogeneous Reactions.
	Contributed 15	12:30pm-12:45pm	Madhava Rao Gade NIT Warangal	Magnetic Effects on Pulsatile Flow of Copper Suspended Nano fluid Venture Through a Bifurcated Artery.
	Contributed 16	12:45pm-01:00pm		
01:00pm-02:00pm Lunch Break (Visitor's Hostel Lawns)				
Technical Session 4(a,b,c,d)(02:00 pm-04:00 pm)				
Tech Session 4a Venue: PBCEA-A	Chairman: Prof. Pravir Dutt			
	Invited 11	02:00pm-02:30pm	Prof. S Chandra Sekhara Rao Department of Mathematics Indian Institute of Technology Delhi	Parallel solution of large sparse diagonally dominant linear systems.
	Invited 12	02:30pm-03:00pm	Prof. Kailash C Patidar Department of Mathematics University of Western Cape	Applications of singular perturbation approaches for problems in mathematical biology.

	Invited 13	03:00pm-03:30pm	Prof. Kapil K Sharma Department of Mathematics South Asian University New Delhi	A Parameter Uniform Numerical Method for time dependent Singularly Perturbed Partial Differential-Difference Equations.
	Invited 14	03:30pm-04:00pm	Prof. Ritesh KumarDubey Department of Mathematics, Kattankulathur Campus, SRM University	Efficient third order accurate entropy satisfying TVD and WENO schemes.
Tech Session 4b Venue: PBCEA-B	Chairman: Prof. G. P. Kapoor			
	Invited 15	02:00pm-02:30pm	Prof. Anand Prakash Singh Department of Mathematics, Central University of Rajasthan	A Glimpse Into The Mathematical Contributions Of Professor G. P. Kapoor.
	Invited 16	02:30pm-03:00pm	Prof. M. Guru Prem Prasad Department of Mathematics Indian Institute of Technology Guwahati	Dynamics of Transcendental Entire Functions.
	Invited 17	03:00pm-03:30pm	Prof. A. K. Bedabrata Chand Department of mathematics, Indian Institute of Technology Madras, Chennai	Fractal Interpolation and Approximation.
	Contributed 17	03:30pm-03:45pm	Saurabh KumarKatiyar IIT Madras	A-Fractal Rational Functions and Their Positivity Aspects.
	Contributed 18	03:45pm-04:00pm	Md Nasim Akhtar IIT Guwahati	Image Compression using Fractal Multiwavelet Transform.

Tech Session 4c	Chairman: Prof. Peeyush Chandra			
Venue: PBCEA-C	Invited 18	02:00pm-02:30pm	Prof. Pentyala Srinivasa Rao Department of Applied Mathematics, Indian School of Mines Dhanbad	Discontinous Galerkin Methods: Special Reference to High Speed Lubrication.
	Invited 19	02:30pm-03:00pm	Prof. Poosan Moopanar Muthu Department of Mathematics, National Institute of Technology Warangal	Oscillatory flow in elastic tubes of varying cross-section with suction/injection.
	Contributed 19	03:00pm-03:15pm	Dr. Deepa Chauhan Allenhouse Institute of Technology, Kanpur	Transient Analysis of Finite Capacity M/M/1 Queue with Priority Based Service and Repairable Server.
	Contributed 20	03:15pm-03:30pm	Dr. Nimisha Mishra AMITY University, Lucknow	Analytical Model for Air Pollution in the Atmospheric Boundary Layer.
	Contributed 21	03:30pm-03:45pm	Dr. Chandhini Godavarma Raja NIT Karnataka	Radial Basis Function Solutions for Nonlinear Fractional Order Initial Value Problems.
	Contributed 22	03:45pm-04:00pm	Dr. Alok Aggarwal AMITY University, Lucknow	Modeling the Adverse Effect of Two Toxicants Causing Deformity in a Subclass of a Biological Species.
Tech Session 4d	Chairman: Prof. A.K.Mishra			
Venue: Outreach	Contributed 23	02:00pm-02:15pm	Dr.Maitri Verma Banaras Hindu University, Varansi	Modeling the consumers' response to rarity on the exploitation of Wildlife species subjected to Allee effect.

Auditorium (seminar room)	Contributed 24	02:15pm-02:30pm	Ku. Vandana Pt. Ravishankar shukla University, Raipur	Inventory model for deteriorating items with trade-credit Policy.
	Contributed 25	02:30pm-02:45pm	Dr. Pankaj Kumar Tiwari Agricultural and Ecological Research Unit, ISI Kolkata	Spatiotemporal Dynamics of a Predator-Prey System with Refuge In Prey and Alternative Food for Predator.
	Contributed 26	02:45pm-03:00pm	Rajanish Kumar Rai Banaras Hindu University Varansi	Modeling The Effect Of Time Delay In Budget Allocation To Control An Epidemic Through Awareness.
	Contributed 27	03:00pm-03:15pm	Ravi Kumar Sahu Tezpur Central University	Structural characterization of fibril forming segment (non-amyloid-β component) of α-synuclein using Molecular Dynamics simulation.
	Contributed 28	03:15pm-03:30pm	Alok Gupta Banaras Hindu University, Varansi	Cholera dynamics with Bacteriophage infection: A mathematical study.
	Contributed 29	03:30pm-03:45pm	Dr. Kusum Lata Banaras Hindu University, Varansi	A mathematical model to achieve sustainable forest management.
	Contributed 30	03:45pm-04:00pm	Agraj Tripathi Bhabha Institute of Technology, Kanpur	Role of Media to Control the Spread of infectious diseases: A Modeling Study .
04:00pm-04:30pm Tea Break (Outreach Auditorium)				

Technical Session 5				
Venue: Outreach Auditorium	Chairman: Prof. Carsten Cartensen			
	Invited 20	04:30pm -05:15pm	Prof. V Raghawendra Department of Mathematics, Indian Institute of Technology Kanpur	Weak solutions of Linear PDE with constant Coefficients.
	Invited 21	05:15pm -06:00pm	Prof. A K Nandakumaran Department of Mathematics , Indian Institute of Science Bangalore	Characterization Optimal Control via Unfolding Operator and Homogenization.
	Invited 22	06:00pm -06:30pm	Prof. Thirupathi Gudi Department of Mathematics , Indian Institute of Science Bangalore	An energy space based approach for the finite element approximation of the Dirichlet boundary control problem.
06:30 pm – 07:30 pm (IAMMS Meeting)				
08:00 pm – 10:00 pm (Banquet)				
Day Three (29-03-2016: Tuesday)				
Technical Session 6				
Venue: Outreach Auditorium	Chairman: Prof. Relja Volanovic			
	Invited 23	09:00am -09:45am	Prof. Veerappa Gowda TIFR Centre for Applicable Mathematics, Bangalore	Structure of entropy solutions to scalar conservation laws with strictly convex flux.
	Invited 24	09:45am-10:30am	Prof. Vasudeva Murthy TIFR Centre for Applicable Mathematics, Bangalore	Revisiting the slow manifold of the Lorenz-Krishnamurthy quintet.

	Invited 25	10:30am-11:00am	Prof. Venky Krishnan TIFR Centre for Applicable Mathematics, Bangalore	Inversion of restricted ray transforms of symmetric m-tensor fields in n-dimensional Euclidean space

11:00am-11:30am Tea Break (Outreach Auditorium)

Technical Session 7(a,b,c,d)(11:30 am-1:00 pm)

Tech Session 7a	Chairman: Prof. Mohan K Kadalbajoo			
Venue: PBCEA-A	Invited 26	11:30am-12:00am	Prof. Y N Reddy Department of Mathematics National Institute of Technology, Warangal	Numerical Integration Method for Singularly Perturbed Differential-Difference Equations.
	Invited 27	12:00am-12:30am	Prof. VP Ramesh School of Mathematics & Computer Science, Central University of Tamil Nadu	Permutations and its applications to Sudoku.
	Invited 28	12:30pm-01:00pm	Prof. Devendra Kumar Department of Mathematics Birla Institute of Technology and Science, Pilani	Solution of Fractional Order Differential Equations.
Tech Session 7b	Chairman: Prof. Malay Banerjee			
Venue: PBCEA-B	Contributed 31	11:30am-11:45ap	Dr. Deepmala SQC & OR Unit, ISI Kolkata	Aircraft Recovery: An Optimization Approach.
	Contributed 32	11:45am-12:00am	Anuj Kumar IIT Patna	Impact of Screening and Treatment on Control of Infectious Diseases.

	Contributed 33	12:00am-12:15pm	Anuradha Yadav IIT Patna	Impact Of Information On Diseases Prevalence When Treatment Is Available.
	Contributed 34	12:15pm-12:30pm	Shiju S IIIT Delhi	Mathematical modeling of mammalian circadian oscillator explains the role of per1 and per2 in morning and evening oscillators.
	Contributed 35	12:30am-12:45pm	Bhupesh Dutt Sharma MNIT Allahabad	Bio-Magnetic Fluid Flow of Blood through Stenotic Artery
	Contributed 36	12:45pm-01:00pm	Avadhesh Kumar IIT Mandi	Exact Controllability of Fractional Integro-differential Systems Order $\alpha \in (1,2]$ with Deviated Argument.
Tech Session 7c Venue: PBCEA-C	Chairman: Prof. Kailash C Patidar			
	Contributed 37	11:30am-11:45ap	Gopal Priyadarshi IIT Kanpur	Solving fourth order multidimensional elliptic partial differential equations using wavelet Galerkin method.
	Contributed 38	11:45am-12:00am	Sunil Kumar IIT Kanpur	A Finite Element Domain Decomposition Approximation for a Semilinear Singularly Perturbed Differential Difference Equation.
	Contributed 39	12:00am-12:15pm	Dr. Shweta Raturi IIT Kanpur	Motion of a drop with thin liquid layer in a bounded medium.

	Contributed 40	12:15pm-12:30pm	Awanish Kumar Tiwari IIT Kanpur	A Rapidly Convergent Nyström Scheme for Electromagnetic Scattering from Orthotropic Media
	Contributed 41	12:30am-12:45pm	Abdul Halim IIT Kanpur	Fourier Spectral method for image Denoising.
	Contributed 42	12:45pm-01:00pm	Pappu Kumar IIT BHU	Numerical solution of fractional hyperbolic bio-heat transfer equation using wavelet method.
Tech Session 7d	Chairman: Prof. Pentyala Srinivasa Rao			
Venue: Outreach Auditorium (seminar room)	Contributed 43	11:30am-11:45ap	Dr. Rajesh Prasad Central University of Rajasthan	2-D Problem of Mode-I Crack for a Type II Thermoelastic Medium.
	Contributed 44	11:45am-12:00am	Dr. Venkata Satish Kumar Mattaparthi Tezpur University	Effect of Tyrosine to Alanine mutations on the intermolecular interactions of α-synuclein dimer: A Potential of Mean Force study.
	Contributed 45	12:00am-12:15pm	Dr. Jotindra Nath Roul Visva Baharati, West Bengal	Optimal control of product assortment in an imperfect and perfect Production system for infinite time horizon
	Contributed 46	12:15pm-12:30pm	Peeyush Singh IIT Kanpur	Robust Technique for solving EHL point contact problems using TVD Approach.

	Contributed 47	12:30am-12:45pm	Jagadeeshwar Pashikanti NIT Warangal	Slip Viscous Flow with Double Stratification and Soret Effect over an Exponentially Stretching Sheet.
	Contributed 48	12:45pm-01:00pm	Hima Bindu Kethiri NIT, Warangal	Analysis of Entropy Generation between Porous Concentric Cylinders due to Micropolar Fluid flow
01:00pm-02:00pm Lunch Break (**Visitor's Hostel Lawns**)				
Technical Session 8(a,b,c)(02:00 pm-04:00 pm) (**Visitor's Hostel**)				
Tech Session 8a Venue: PBCEA-A	Chairman: Prof. Y N Reddy			
	Invited 29	02:00pm-02:30pm	Prof. Ashish Awasthi Department of Mathematics National Institute of Technology Calicut	A Robust Computational Approach to Solve Singularly Perturbed Differential Equations.
	Invited 30	02:30pm-03:00pm	Prof. Vivek Kumar Agarwal Delhi Technological university	Optimized adaptive mesh for singularly perturbed problems.
	Invited 31	03:00pm-03:30pm	Prof. Vikas Gupta Department of Mathematics LNMIIT Jaipur	Higher order numerical scheme for singularly perturbed differential-difference convection-diffusion problem.
	Contributed 49	03:30pm-03:45pm	Dr. Alpesh Kumar Department of Mathematics, Indian Institute of Technology Kanpur	A radial basis function based operator splitting method for pricing American options.

	Contributed 50	03:45pm-04:00pm	Lok Pati Tripathi Department of Mathematics, Indian Institute of Technology Kanpur	A finite element error estimate for a parabolic partial differential Inequality arising in the pricing of American options.
Tech Session 8b Venue: PBCEA-B	Chairman: Prof. Kapil K Sharma			
	Invited 32	02:00pm-02:30pm	Prof. Boddapati Srivathsa Modelling and Simulation Group DMRL, DRDO, Kanchanbagh	Simulation of stress build-up and failure in a thermal barrier coating system during thermal cycling.
	Invited 33	02:30pm-03:00pm	Prof. Vivek Sangwan Thapar University, Patiala	A Robust Exponentially Fitted Finite Element Technique for Singularly Perturbed Differential Difference Equations.
	Contributed 51	03:00pm-03:45pm	Ambuj Pandey Department of Mathematics, Indian Institute of Technology Kanpur	A Rapidly Convergent Nyström Scheme for Scattering by Three Dimensional Inhomogeneous Media.
	Contributed 52	03:45pm-04:00pm	Meena Pargaei Department of Mathematics, Indian Institute of Technology Kanpur	Existence for the bidomain model used in electrophysiology.
Tech Session 8c Venue: PBCEA-C	Chairman: Prof. Ram Naresh			
	Invited 34	02:00pm-02:45pm	Prof. J.B. Shukla Department of Mathematics, Indian Institute of Technology Kanpur	Modelling the Effects of Awareness Program by Media On Biosystems.

	Invited 35	02:45pm-03:15pm	Prof. Arvind Kumar Mishra Department of Mathematics, Banaras Hindu University Varanasi	Modeling the interplay between epidemic and media campaigns.
	Invited 36	03:15pm-03:45pm	Prof. Shikha Singh Department of Mathematics PPN College, CSJM University, Kanpur	Modeling Bioterrorism In A Population : Effects Of Infectious Agents.
	Contributed 53	03:45pm-04:00pm		
04:00pm-04:30pm Tea Break (**Outreach Auditorium**)

Technical Session 9 (Outreach Auditorium)

	Chairman: Prof. B V Rathish Kumar			
Venue: Outreach Auditorium	Invited 38	04:30pm-05:15pm	Prof Pravir Dutt Department of Matematics, Indian Institute of Technology Kanpur	Least-Squares Spectral Element Method For Stokes Equations on Non Smooth Domains Using parallel Computers.

05:15pm-06:00pm Valedictory Function (Outreach Auditorium)