



International Conference
On
Complex Analysis and Computational Fluid Dynamics (ICCACFD
2024)
February 16-18, 2024



Programme Schedule

Day 1 February 16, 2024

Day1 (February16,2024) Venue: <u>Campus 7 Auditorium</u>			
07:30-9:15 am	Breakfast & Registration		
9:15-10:00 am	Inauguration		
	Speakers	Title	Session Chair
10:15-11:15 am	Prof. S. Ponnusamy , Chair Professor, IIT Madaras	Harmonic Mappings and Dirichlet Problems	Prof. A. K. Mishra
11:15-11:30 am	High Tea		
11:30-12:30 pm	Prof. Kirti Chandra Sahu, Professor, IIT Hyderabad	Incredible behaviours of bubbles and drops	Prof. S. Bhattacharyaa
12:30-01:30 pm	Prof. Suman Chakraborty, Professor, IIT Kharagpur	Personalized Cardiovascular Assessment via Medical Image-Trained Hemodynamics Simulations –Towards Simulated Clinical Trials on Virtual Patients	Prof. Kirti Chandra Sahu
01:30-02:30 pm	Lunch		
Parallel Session-1 Venue: <u>Campus 6, Conference Hall 1</u>			
02:30-03:30 pm	Prof. Vesna Todorcevic, Prof. University of Belgrade, Serbia	Geometry of domains and harmonic analysis	Prof. Swadesh Kumar Sahoo
3:30-4:00 PM	Dr. Sanjeev Singh, Assistant Professor, IIT Indore	Geometric properties of Bessel and regular Coulomb wave functions	
4:00-4:15 pm	Dr. Vibhuti Arora, Assistant Professor, NIT Calicut, Kerala	Successive coefficients for functions in the spirallike family	
4:15-4:30 pm	Sheetal Wankhede, Research Scholar, IIT Indore, M.P	Horizontal shear of Ces'/aro type transform	

04:30-04:45 pm	High Tea		
04:45-05:00 pm	Dr. Shankey Kumar, Postdoctoral Fellow, IIT Madras	On the Multi-dimensional Bohr radius	Prof. Bappaditya Bhowmik
5:00-5:15 pm	Santosh Mandal, Research Scholar, Berhampur University, Odisha	Fourth-order differential superordination results for analytic functions involving the generalized Bessel functions	
5:15-5:30 pm	Ms. Laxmi Majhi, Research Scholar, G M University, Odisha	New bilateral hypergeometric series by employing Bailey's Transformation	
5:30-5:45 pm	Nitai Mandal, Research Scholar, S.K. B University, Purulia, W.B	On the dynamics of Steffensen's and Jarratt iterative root-finding maps	
5:45-18:00 pm	Sudhansu Palei, Research Scholar, Berhampur University, Odisha	Differential subordination and superordination results for analytic functions defined by new operator	
Parallel Session-2 (Venue: Campus 6, Conference Hall 2)			
02:30-03:15 pm	Prof. S. Bhattacharyya, Professor, IIT Kharagpur	Modelling of electrokinetic transport process in microfluidics	Prof. Manoranjan Mishra
3:20-03:40 pm	Tapan Jana, Research Scholar, IIT Kharagpur	A particle-based computational approach for simulating dam break problem	
3:40-3:50 pm	Arjun Agrawal, Research Scholar, VSSUT, Burla	Impact of Soret and Heat Source/ Sink on Induced Magnetic Field and polar fluid through the Concentric Annuli	
3:50-4:00 pm	Dr. Manoranjan Mishra, Professor, GIT, Bhubaneswar	Entropy generation and heat transfer analysis of hybrid nanofluid in high-performance thermal systems in the presence of Lorentz force	
4:00-4:10 pm	Pratibha Bhoi, Research Scholar, VSSUT, Burla	Finite Difference Analysis of Hydromagnetic Flow and Heat Transfer of an Elastico-viscous Fluid between two Horizontal Parallel Porous Plates	Dr. Debdulal Panda
4:10-4:42 pm	Chinmoy Rath, Research Scholar, KIIT DU	Magnetohydrodynamic gravity-driven flow of viscoelastic fluid past an inclined plate with Soret-Dufour and Joulian dissipation effects	
4:20-4:30 pm	Manisha Devi, Asst. Professor, GIFT, Bhubaneswar	Analysis of flow and heat transfer of hybrid nanofluid past a stretching sheet with the influence of Lorentz force and slip boundary conditions	
4:30-4:45 pm	High Tea		
4:50-5:10 pm	Manoj K. Rajpoot, Associate Professor, Rajiv Gandhi Institute of Petroleum Technology, Jais, Amethi, UP	To be announced	Dr. Subhadarshan Sahoo
5:10-5:20 pm	Dr. Sanjit Kumar Mohanty, Asst. Professor, B.S College, Jajpur	A Generalized Quadrature Based Adaptive Integration Scheme	
5:20-5:30 pm	Gouri Sankar Barik, Research Scholar, GIFT, Bhubaneswar	Joule heating and viscous dissipation effects for water based hybrid nanofluid flow in a porous medium with elastic deformation	

5:30-5:40 pm	Shubhashish Jena, Research Scholar, IIT Patna	Enhancing Elderly Population Health Supervision through Posture Detection using Deep Learning	
5:40-5:50 pm	Akash Vikram, Research Scholar, NIT Hamirpur, H. P	Numerical investigation for melting behavior of encapsulated-PCM in fin-intensified battery thermal management systems	
5:50-6:00 pm	Dr. Goutam Kumar Mahato, Associate Professor, CUTM, Bhubaneswar	Dissipative Effects on Natural Convection MHD Nano-Fluid Flow past a Stretchable Melting Surface	

Day 2
February 17, 2024

7:30-09:00 am			
Breakfast			
Parallel Session-1 (Venue: Campus 6, Conference Hall-1)			
	Speakers	Title	Session Chair
9:00-10:00 am	Prof. Sushil Gorai, Associate Professor, IISER, Kolkata	Continuous extension of conformal maps on planar domains and the notion of visibility	Prof. Saminathan Ponnusamy
10:00-11:00 am	Prof. Swadesh Kumar Sahoo, Professor, IIT Indore	The quasihyperbolic metric and geometry of domains	
11:00-11:15 am High Tea			
11:20-12:05 PM	Prof. Sairam Kaliraj, Asst. Professor, IIT Ropar	Minimal Surfaces and Harmonic Mappings	Prof. Sushil Gorai
12:05-12:50 PM	Prof. P.Muthukumar, Asst. Professor, IIT Kanpur	Automorphisms of some spaces of analytic functions	
12:50-1:05 PM	Dr. Firdoshi Parveen, Asst Prof, SRM University, AP	Successive coefficients and Toplitz detrimnant for concave univalent functions	
1:05-1:20	Priyanka, Research Scholar, MRSPTU, Bhatinda, Punjab	Integrability and L1- Convergence of Trigonometric Complex Sums	
1:30-2:30 pm Lunch			
2:30-3:30 pm	Prof. Bappaditya Bhowmik, Associate Prof, IIT Kharagpur	Bloch and Landau constants for meromorphic functions	Prof. Sairam Kaliraj
3:30-3:45 pm	Dr. Sarbeswar Barik, Asst. Professor, CU, Koraput	Logarithmic coefficient estimates for Some Subclasses of univalent functions	
3:45-4:00 pm	Prachi Prajna Dash, Research Scholar, CU, Rajasthan, Rajasthan	Certain subclass of harmonic functions associated with univalent functions	
4:00-4:15 pm	Sakshi, Research Scholar, MRSPTU, Bhatinda, Punjab	Integrability and L1-Convergence of Two-Dimensional Trigonometric Sums	
4:15-4:30 pm	Sagarika Dash, Research Scholar, KIIT DU	On study of $(g;\varphi)$ Fractional Differential Inequality Problems of order α .	
4:30-4:45 pm High Tea			
4:45-5:00 pm	Dr. Pankajini Tripathy, Asst. Professor, KISS DU	Approximation of Fourier series of functions in Besov Space by Riesz mean	Dr. Birupakhya Padhy
5:00-5:15 pm	Bijayini Badajena, Research Scholar, KIIT DU	Degree of approximation of Fourier series of functions in Besov space by differed Riesz mean	
5:15-5:30 pm	Dr. Subhadarshan Sahoo, KIIT DU	Novel Solitary Wave Solutions: Exploring the Depths of Complex Cubic-Quintic Nonlinear Helmholtz Equation	
5:30-5:45 pm	Shovana Dutta, Research Scholar, IIT(ISM) Dhanbad, Jharkhand	Finding the positive integer solutions of a polynomial	

		Diophantine equation in terms of the Lucas numbers	
5:45-6:00 pm			
Parallel Session-2 (Venue: Campus 6, Conference Hall -2)			
9:00-9:55am	Prof. Prashant Dutta, Professor ,WSU, USA	Electric Field-Driven Characterization of Bio-vesicles	Prof. Ameeya K. Nayak
9:55-10:50 am	Prof. Manoranjan Mishra, Professor, IIT Ropar	Reaction-Induced Instability Patterns in a Porous Medium for Radial Flow.	
10:50-11:00 am	Kavitha Radhakrishnan, Research Scholar, BITS Pilani, Dubai Campus	Flow around a flat plate near stall angle at a Reynolds number of 28000.	
11:00-11:15am	High Tea		
11:15-12:10 pm	Prof. Ameeya K. Nayak, Professor, IIT Roorkee	Influence of Debye layer thickness and species concentration on Electromigration dispersion of charged solutes in micro channel.	Dr. Mrutyunjay Das & Dr. S. Mohanty
12:10-01:05 pm	Prof. Rajendra Kumar Ray, Professor, IIT Mandi	Study of Vortex dynamics with Structural Bifurcation Analysis for Flow Past Bluff Bodies.	
1:05-1:15 pm	Bangaru Rama Prasadu, Research Scholar, KIIT DU	Solution of the modified elliptic restricted three-body problem by using Lie-series technique	
1:15-1:25 pm	Puspanjali Mahapatra, Research Scholar, SIT, Bhubaneswar	Effects of buoyancy force and multiple slips on flow and heat transfer of hybrid nanofluid past a stretched surface	
1:30-2:30 PM	Lunch		
2:30-2:40 pm	Subhrajit Kanungo	MHD chemical reaction effects on NHD flow over a moving infinite vertical porous plate with heat and mass transfer	Dr. Anita Nayak & Dr. Laxmipriya Nayak
2:40-2:50 pm	Dr. Partha Sarathi Majee, Asst. Professor, BIT MESHRA, Jharkhand	A semi-analytical study on diffusiophoresis of a soft particle with hydrophobic core considering the ion partitioning effect	
2:50-3:00 pm	Dr. Satya Subha Shree Sen, Asst. Professor, KIIT DU	Artificial Intelligence-Based Prediction of Heat Transfer in the Ellis Hybrid Nanofluid Flow over a Stretching Cylinder under Catalytic Effects	
3:00-3:10 pm	Sasikala J, Research Scholar, Amritha Viswa Vidya pitham, Banglure	Utilizing Subparametric Transformation in Finite Element Analysis for Darcy-Brinkman-Forchheimer Flow with Curved Trinagular Element of Higher-Order	
3:10-3:20 pm	Dr. Vijil Kumar, Asst Professor, KIIT DU	Dynamical analysis of the some hazardous asteroid and their future dynamical evolution	
3:20-3:30 pm	Sujay S.S, Research Scholar, NITK, Surathkal	Experimental and CFD simulations of hydrodynamics in a Packed bed Column	

3:30-3:40 pm	H. M. Dilushi Shashikala Prabodani Herath, Research Scholar, KIIT DU	Nanofluidic Sensors for Early Cancer Detection and Precision Medicine	
3:40-3:50 pm	Sumanta Kumar Parida, Research Scholar , SOA University, Bhubaneswar	An Electroosmotic Study of Two-phase Blood Flow in Non-uniform Microchannel	
3:50-4:00 pm	Durgaprasad Nayak	A Computational approach for equal width equation.	
4:00-4:10 pm	Pranav Mehrotra	CFD Analysis of Hydrodynamic Journal Bearing Operating with non-Newtonian Lubricant	
4:10-4:4:20 pm	Dr. M. ESWARA RAO, Asst. Professor, Saveetha School of Engineering, SIMATS, Chennai	Examining fluid flow characteristics on stretching surfaces: A comparative analysis of Williamson, Jeffrey and Maxwell fluid	
4:20-4:30 pm	Anushrey Singh, Research Scholar, Netaji Suvas University of Technolgy	CFD Analysis of Hydrostatic Thrust Bearing Operating with non-Newtonian Lubricant	
4:30-4:45 pm	High Tea		
4:50-5:00 pm	Shubhashish Jena, Research Scholar, IIT Patna	Enhancing Elderly Population Health Supervision through Posture Detection using Deep Learning	Dr. Rajashree Mishra
5:00-5:10 pm	Suman Sarkar	Radiative B ⁿ odewad ^t flow with a horizontal magnetic field	
5:10-5:20 pm	Chandrakanta Parida, Research Scholar, C. V. Raman Global University	Non-linear-radiative Casson, MHD, Nanofluid Past a Stretching Sheet with Activation Force over the Surface.	
5:20-5: 30 pm	Debashis Mohanty, Research Scholar, C.V Raman Global University	Numerical analysis of radiative and dissipative MHD Darcy-Forchheimer hybrid nanofluid flow with entropy optimization due to a stretching sheet.	
5:30-5:40 pm	Sashi Bhushana Parida, Research Scholar, KIIT DU	Chemically Reactive Non-linear MHD, Thermally Radiative Nanofluid Past a Stretching Sheet with Activation Force over the Surface	
5:40-5:50 pm	Dr Manas Ranjan Mishra, Assistant Professor, OP Jindal University, Raigarh	The impact of High order chemical reaction on a moving plate in a porous medium and MDH forced convection of Jeffrey Nanofluid	
5:50-6:00 pm	Gouri Shankar Guru, School of Mathematics, Gangadhar Meher University, Sambalpur,768004	Some new congruences modulo 3 for t-colored overpartitions	
7:30 pm	Conference Dinner		

Day 3
February 18, 2024

Parallel Session-1 (Venue: Campus 6, Seminar Hall- 1)			
7:30-9:00 am	Breakfast		
	Speakers	Title	Session Chair
09:00-10:00 am	Prof. Akshaya Kumar Mishra, Ex. Director IMA, Bhubaneswar	To be announced	Prof. S. K. Samal
10:00-11:00 am	Prof. Vasudev Rao Allu, Professor, IIT Bhubaneswar	Landau-Bloch type theorem for elliptic and quasi-regular harmonic mappings	
11:00-11:15	High Tea		
11:15-11:30 am	Akash Meher, Research Scholar, Sambalpur University, Odisha	Bohr phenomenon for univalent logharmonic mappings	Prof. M. P. Biswal
11:30-11:45 am	TAPASI PASAYAT	Analytical solution for Fractional order Generalized Kuramoto-Sivashinsky Equations using Shehu Transform	
11:45-12:00 pm	Domada, Research Scholar, Andhra University	Multilevel Encryption of Laplace Transforms and Trees via Fibonacci Matrices	
12:00-12:15 am	GUDELA ASHOK, Research Scholar , Andhra University	Enhancing RSA Cryptosystem Security with Vieta-Pell-Lucas Techniques	
12:15-12:25 pm	Swapna Kumar Sahoo	To be announced	
12:25-12:35 pm	Priyanka Koner	To be announced	
12:35-12:45 pm	Chinmayee Rout	To be announced	
12:45-1:05 pm	Ranjan Kumar Sahoo	To be announced	
1:05-1:15 pm	Smruti Ranjan Sahoo	To be announced	
1:15-1:25 pm	Dr. Ujjwal Kanti Ghoshal	To be announced	
1:30-2:30 pm	LUNCH		

Parallel Session 2 (Venue :campus 6, seminar hall 2)

9:00-9:45 am	Prof. Sanyasi Raju VSS Yedida, Professor, IIT Madras	Stable numerical computations for solving Stefan Problems.	Prof. Promod Kumar Das
9:45-10:30 am	Prof. T.V.S Sekhar, Professor, IIT Bhubaneswar	Multilevel Meshless Finite Difference Method for Boundary-Value Problems.	
10:30-10:40 am	Dr. Mohammed Siddique, Asst. Professor, CUTM, Bhubaneswar	Brain Tumor Detection and Classification using Fuzzy C Means Segmentation and Local Linear Radial Basis Functional Neural Network Model	
10:40-10:50 am	Dr. Sasi Bhusan Padhi, Asst. Professor, CUTM, Bhubaneswar	MHD Natural Convection Nano-Fluid Flow past a Stretchable Melting Surface with Chemical Reaction	
10:50-11:00 am	Prasanta Parida, Research Scholar, Mangalayatan University, Aligarh	Effects of copper and alumina nanoparticles on the flow of hybrid nanofluid past a shrinking/stretching wedge	
11:00-11:15 am	High Tea		
11:15-12:00 pm	Prof. S. Padhy, Former Director, IMA, Bhubaneswar	An overview of numerical techniques and Machine Learning methods for Fluid Dynamics	Prof. Promod Kumar Das
12:00-12:10 pm	Kanak Lata Xalxo, Research Scholar, KIIT DU	Sensitivity study of WRF microphysics parameterization schemes to automatic vortex following simulation for the extremely severe cyclonic storm "MOCHA"	
12:10-12:20 pm	Paras Seth	To be announced	
12:20-12:30 pm	Ishaan Nagpal	To be announced	
12:30-12:40 pm	Devansh Rastogi	To be announced	
12:40-12:50 pm	Manas Ranjan Panda	To be announced	
12:50-1:00 pm	Nikita Kozlov, Research Scholar, Ural Fedral University, Russia	Numerical Modeling of Hemodynamics in Affected Areas of the Circulatory System	
1:00-1:10 pm	Uttam L. Anuse, Research Scholar, SERVI College of Engineering, Maharashtra	On the use of Taguchi-based Grey Relational Analysis (GRA) Approach for Design Optimization of Square Chamber-Based Chaotic Micromixer (SCBC-M)	Dr. Vishal Pradhan
1:10 -1:20 pm	Abhishek Khare, Research Scholar, BITS Pilani, Dubai campus	Improved Delayed Detached Eddy Simulation of Micro-Vortex Generators Mounted on NACA 4412 Airfoil	
1:20-1:30 pm	Kuracha Nirisha, Research Scholar, GITAM DU	Effects of nanoparticle shapes on heat source/sink in non-Darcy porous media channel	
1:30-2:30	Lunch		
2:30 PM onwards	Valedictory		

