# **ICCACFD 2024** International Conference on Complex Analysis and Computational **Fluid Dynamics**

#### Organized by

**Department of Mathematics** KIIT Deemed to be University Bhubaneswar, Odisha

#### About the Conference

The objective of this International Conference is to bring together academicians, researchers, and leading scientists to exchange innovative ideas, methods, results, and discuss on recent developments related to complex analysis and computational fluid dynamics. Complex analysis provides a solid foundation for understanding the mathematical aspects of CFD, leading to more accurate and reliable simulations. Complex analysis techniques are often used to solve problems and analyze flow patterns involving complex, nonlinear equations and boundary value problems in CFD. The mathematical tools and insights of complex analysis can significantly enhance the accuracy, efficiency, and understanding CFD simulations making it a valuable field for interdisciplinary research area. By bringing researchers from these areas together, this conference can facilitate discussions on novel approaches, solutions to challenging CFD problems, exchange of knowledge and encourage collaborations, interdisciplinary research.

## About Department of **Mathematics**

Department of Mathematics, KIIT DU shares the vision of the institute for achieving the excellence in teaching and research. Department of Mathematics offers post graduate (M. Sc in Mathematics with Data Science) and Ph.D. programmes. The department also supports all the engineering and Science departments by offering core and interdisciplinary courses for under graduate (B. Tech) and post graduate (M.Tech./M. Sc./Ph.D.) programmes. At present Department of Mathematics have 45 faculty members having their degrees from IITs, NITs, and abroad. The Department has research scholars working in the diverse areas of Pure/ Applied Mathematics and Statistics. The department regularly organizes conferences, seminars and workshops to maintain a vibrant atmosphere.





#### February 16-18, 2024

## About KIITDeemed to be University

Kalinga Institute of Industrial Technology (KIIT) was founded by Prof. Achyuta Samanta in 1992-93 with an objective to provide quality education & research with specific attention to Universal access to education & equity. The commitment to teaching excellence led it to the grant of University status under section 3 of UGC Act, 1956 in 2004. It offers a wide range of programs to students applying for undergraduate, postgraduate and doctoral programs in Engineering, Science, Management, Medicine, Health Sciences, Agriculture, Law & Humanities. KIIT has been engaged in nurturing minds through a rich heritage of academic excellence. Essentially a hub of bustling student activities, the green and beautiful campus has been a second-home to thousands of students in their journey to pursue higher education. Now the Institute enjoys an unsurpassed reputation in academia and corporate circles and recognized as a worldclass learning institution. Its rank is 16 among Indian Universities by NIRF. It is also accredited by NAAC (A++), NBA(Tier 1), AIRA(rank 1), ABET and IET etc.

## Call for papers

ICCACFD 2024 invites you to submit unpublished original research papers on Complex Analysis and Computational Fluid Dynamics. The topics covered (but are not limited to) are as follows:

#### **Complex Analysis:**

Univalent function theory, Quasiconformal mappings, Harmonic mappings, Several complex variables, Geometric function theory, Special functions, Complex Dynamics.

#### **Computational Fluid Dynamics:**

Complex fluid flow, Algorithm and Numerical Scheme, Mesh-free and Cartesian methods, High performance/ parallel computing, High Speed flows, Unsteady/Steady flows, CPU and GPU computing, LES and DNS, Computation heat and fluid flow, Transition/Instability, Micro/Nanofluidics, AI& ML CFD Simulations, Boundary Layer Flows, Nonlinear PDEs and Emerging areas of CFD.

Note: The selected papers will be published free of cost in SCOPUS indexed conference proceedings and SCI indexed journal.

## **Chief Patron**

Prof. (Dr.) Achyuta Samanta (Founder KIIT, KISS, KIMS)

## Patrons

Prof. Saranjit Singh (VC, KIIT DU) Prof. Jynana Ranjan Mohanty (Registrar, KIIT DU) Prof. Prasanta Rath (DEAN, SAS)

#### International **Advisory Committee**

Prof. Jay M. Jahangiri (Kent State University, Kent, Ohio, USA) Prof. David Kalaj (University of Montenegro, Montenegro) Prof. Vesna P. Todorcevic (University of Belgrade, Serbia) Prof. Prashant Dutta (Wasington State University, Wasington, USA) Prof. Snandip Ghosal (Northwestern University, Evanston, USA Prof. Khoo Boo Cheong (National University of Singapore, Singapore)

#### National **Advisory Committee**

Prof. Saminathan Ponnusamy (Chairman) (IIT Madras, Chennai, India) Prof. Somnath Bhattacharyya (IIT Kharagpur) Prof. Suman Chakraborty (IIT Kharagpur) Prof. Sudarsan Padhy (Retd. Prof. Utkal University) Prof. Jagannath Patel (Retd. Professor, Utkal University, Odisha) Prof. Akshaya Kumar Mishra (Retd. Professor, Berhampur University, Odisha) Prof. Swadesh Kumar Sahoo (IIT Indore) Prof. Sushil Gorai (IISER Kolkata) Prof. Sanyasiraju V.S.S (IIT Madras) Prof. G. D. Veerappa Gowda (TIFR CAM, Banglore) Prof. T. V. S. Sekhar (IIT Bhubaneswar) Prof. Kirti Chandra Sahu (IIT Hyderabad) Prof. Ameeya K. Nayak (IIT Roorkee) Prof. Manoranjan Mishra (IIT Ropar) Prof. Rajendra K Ray

#### **Speakers:**

Prof. Prashant Dutta (Wasington State University, Wasington, USA) Prof. Vesna P. Todorcevic (University of Belgrade, Serbia) Prof. Saminathan Ponnusamy (IIT Madras, Chennai, India) Prof. Somnath Bhattacharyya (IIT Kharagpur) Prof. Suman Chakraborty (IIT Kharagpur) Prof. Sudarsan Padhy (Retd. Professor and Director IMA, BBSR) Prof. Jagannath Patel (Retd. Professor, Utkal University, Odisha) Prof. Akshaya Kumar Mishra (Retd. Professor and Director IMA, BBSR) Prof. Swadesh Kumar Sahoo (IIT Indore) Prof. Sushil Gorai (IISER Kolkata) Prof. Sanyasiraju V.S.S (IIT Madras) Prof. G. D. Veerappa Gowda (TIFR CAM, Banglore) Prof. T. V. S. Sekhar (IIT Bhubaneswar) Prof. Kirti Chandra Sahu (IIT Hyderabaad) Prof. Ameeya K. Nayak (IIT Roorkee) Prof. Manoranjan Mishra (IIT Ropar) Prof. Rajendra K. Ray (IIT Mandi) Prof. G. C. Layek (University of Burdwan, West Bengal) Prof. Vasudev Rao Allu (IIT Bhubaneswar) Prof. Bappaditya Bhowmik (IIT Kharagpur) Prof. Sairam Kaliraj (IIT Ropar) Prof. Sanjeev Singh (IIT Indore) Prof. P. Muthukumar (IIT Kanpur)

#### **Important Dates:**

January 31,2024 Abstract Submission Deadline: January 31, 2024 Abstract Acceptance Notification: January 31, 2024 January 31, 2024 **Registration Deadline:** Paper Submission Deadline: February 10,2024

#### **Registration Fee :**

Research Scholars:	Rs. 2500
Faculty members/Scientists:	Rs. 4000
Industry Participants:	Rs. 7000
Foreign Participants:	\$100

Registration fees include abstract presentation.

(IIT Mandi) Prof. G. C. Lavek (University of Burdwan, West Bengal)

#### **Local Advisory Committee**

Prof. S. Nanda

Prof. P. K. Das

Prof. M. P. Biswal

Prof. M. Das

Prof. B. B. Mishra

Prof. S. K. Samal

Prof. S. K. Mishra

Dr. P. K. Mohanty

Dr. A. K. Paul

Dr. S. Acharyya

#### conference kit and food during the conference.

#### **Local Organizing Committee**

Dr. Birupakhya Prasad Padhy Dr. Biranchi Kumar Mahala Dr. Manoranjan Sahoo Dr. Akshaya K. Panda Dr. Rajib Mia Dr. Suvasis Nayak Dr. Arun Gupta Dr. Subhadarshan Sahoo Dr. Abhijit Sutradhar Dr. Vishal Pradhan Dr. Bapuji Sahoo Dr. Kartikeswar Mahalik Dr. Sudipto Ghosh Dr. Madhusmita Sahoo Dr. Lakshmipriya Nayak Dr. Anita Nayak

- Dr. Priyanka Koner
- & All the faculty members of the department of Mathematics

#### Website :iccacfd.kiit.ac.in Email:iccacfd2024@gmail.com

#### Conveners

Dr. Ranjan Kumar Nayak (M. 8144009048) Dr. Manas Ranjan Mohapatra (M. 8989833623)