



International Conference on Advanced Computing Systems

Adcomsys 2024

Organized by:

Department of Computer Science and Technology & Computer Science and Information Technology (CST and CSIT)

26th and 27th June, 2024

https://adcomsys.uem.edu.in/









INTERNATIONAL ADVISORY COMMITTEE

Dr. Lawrence Dalmarie - UDC, USA Dr. Karina Aragon Gaxiola - University of Waterloo, Canada Dr. Mohammad Al Azawi - OCMT, Oman Dr. Mohammed Beitsuwaflim - Sultan Qaboos University, Oman Dr. Dena McMartin - University of Saskatchewan, Canada Dr. David deMontigny - University of Regina, Canada

Dr. Mohd Hafiz Bin Fazalul Rahiman - UMP, Malaysia Dr. Nathalie Tourigny - University of Waterloo, Canada

Dr. Marian Langbridge - SEMC, UK Dr. March - Shannon, UN, Canada

Dr. Obermayer - KTU, Netherland

Dr. lei zhu - NREL, USA Dr. Michael Osborne - University of Oxford, UK

Dr. Robert F Davis - CMU, USA Dr. Burak O Ozdoganlar - CMU, USA Dr. Boudreault - Mathieu, MHI, Canada

Dr. Boukadoum - A. MMHI, Canada Dr. Richard Linley - University of Cambridge, UK Dr. Qusay Mahmoud - Ontario Tech University, Canada

Dr. Mekonnen - Gashaw, CHSAAU, Ethiopia Dr. Gregory Dudek - McGill University, Canada

Dr. Sylvie Thiebaux - ACCS, Australia Dr. Adam W. Skorek - University of Québec at Trois-Rivières, Canada Dr. Michel Plaisent - University of Quebec in Montreal, Canada

Dr. Jörg Sander - University of Alberta, Canada Dr. Erik Cambria - Nanyang Technological University, Singapore Dr. Nathalie Japkowicz - American University, USA Dr. Liming Zhang - University of California, USA

Dr. Wudhichart Sawangphol - Mahidol University, Thailand Dr. Noraisyah Binti Mohamed Shah - University of Malaya, Malaysia Dr. Raj Jain Washington University - USA Dr. Hadj Bourdoucen - Sultan Qaboos University, Oman

Dr. Vincenzo Piuri - Universita' degli Studi di Milano, Milano, Italy Dr. Nor Ashidi Mat Isa - Universiti Sains Malaysia, Malaysia Dr. V.G. Tharinda Nishantha Vidanagama - WUSL, Sri Lanka Dr. Hazlie Mokhlis - University of Malaya, Kuala Lumpur, Malaysia. Dr. Ahmad Zhafran Bin Ahmad Mazlan - USM, Malaysia

Dr. Nadine Akkari - Jeddah International College, Saudi Arabia Dr. Basel Barakat - University of Greenwich, UK Dr. Hosam El-Ocla - Lakehead University, Canada Dr. Mohd Asyraf Zulkifley - National University of Malaysia, Malaysia

TECHNICAL PROGRAM COMMITTEE

Dr. Rajat Kumar Pal - University of Calcutta, Kolkata, India Dr. Mokbul Morshed Ahmad - Asian Institute of Technology, Thailand

Dr. Nabendu Chaki - University of Calcutta, India

Dr. Mohd Syuhaimi Ab Rahman - NUM, Malaysia Dr. Rajitha B - MNNITA, Prayagraj, India

Dr. Shirley Devapriya Dewasurendra - University of Peradeniya, Sri Lanka Dr. Anirban Mukhopadhyay - University of Kalyani, Kalyani, India Mr. Bidit Pakrashi - Comcast, USA

Dr. Debashish De - MAKAUT, West Bengal

Dr. Sheng-Lung Peng - National Dong Hwa University, Hualien, Taiwan Dr. Indrajit Banerjee - IIEST, Shibpur, India

Dr. Shivendra Shivani - Thapar University, Patiala Dr. Ekramul Hamid - University of Rajshahi, Bangladesh Dr. Chintan Kumar Mandal - Jadavpur University

Dr. Media Anugerah Ayu - Sampoerna University, Indonesia

Dr. Santi Prasad Maity - IIEST, Shibpur, India Dr. Fatima Isiaka - Sheffield Halam University, United Kingdom

Dr. Peter Loh Kok Keong - Nanyang Technological University, Singapore Dr. Asish Kumar Mukhopadhyay - Prof. Emeritus, IET, BU, Jhansi, U.P

Dr. Apurba Sarkar - IIEST, Shibpur, India

Dr. Jaya Sil - IIEST, Shibpur, India

Dr. Tapas Chatterjee - Indian Institute of Technology, Ropar Dr. Hamid Abdullah Jalab al-Tulea - UM, Kuala Lumpur, Malaysia

Dr. Chang-Biau Yang - National Sun Yat-sen University, Kaohsiung, Taiwan Dr. Surajit Kumar Roy - IIEST, Shibpur, India

Dr. David deMontigny - University of Regina, Canada Dr. Mohd Hafiz Bin Fazalul Rahiman - UMP, Malaysia

Dr. Marian Langbridge - School of Engineering & Material Science, UK

Dr. March, Shannon - University of Newfoundland, Canada Dr. Lei Zhu - National Renewable Energy Laboratory, USA

Dr. Nidul Sinha - National Institute of Technology, Silchar, Assam, India

Dr. Annapa B - National Institute of Technology, Silchar, Assam, India

Dr. Malay Kule - IIEST, Shibpur, India

Dr. Sankhayan Choudhury - University of Calcutta, India Dr. Sunirmal Khatua - University of Calcutta, India

Dr. Pritha Banerjee - University of Calcutta, India

Dr. Rajib Das - University of Calcutta, India Dr. Bansibadan Maji - National Institute of Technology, Durgapur, India

Dr. Tanvi Agrawal - Indian Institute of Technology, Mumbai

Dr. Sahil Neelam - Punjab Institute of Technology Kapurthala, India Dr. Rik Das - Xavier Institute of Social Service

Dr. Parag Kumar Guha Thakurta - NITD, India Dr. Simon Stieber - University of Augsburg, UNA

Dr. Abdulnasir Hossen - Sultan Qaboos University, Oman Dr. Padmalochan Bera - Indian Institute of Technology, Bhubaneswar Dr. Himadri Shekhar Dutta - Kalyani Govt. Engineering College

Dr. Ahmad Zaidi bin Abdullah - Universiti Malaysia Perlis, Malaysia Dr. Roy Eagleson - Western University, Canada

Dr. Soumya Sen - University of Calcutta, India Dr. K.K. Shukla - IIT, Banaras Hindu University, India Dr. Julia Johnson - Laurentian University, Sudbury, Ontario, Canada

Dr. Rinki Sharma Ramaiah - UAS, Karnataka, India Dr. Tapas Si - University of Engineering & Management, Jaipur Dr. Normi sham bt. Awang Abu bakar - IIU, Malaysia Prof. Adrian Schmidt - Burman University, Canada

Dr. Ke-Lin Du - Concordia University Montreal, Canada Dr. Hamed Sadat mehrizi - Qazvin Azad University, Iran Dr. Rosli Bin Besar - Multimedia University, Malaysia

Dr. Saradindu Panda - Narula Institute of Technology Kolkata, India Dr. Nirnay Ghosh - IIEST, Shibpur, India Dr. Indranil Chakrabarty - IIIT, Hyderabad, India Dr. Arijit Banerjee - Federated Wireless, USA

Dr. Konika Das Bhattacharya - IIEST, Shibpur, India

Mr. Sanjay Saha - SAMSUNG, India Dr. Rudra Pratap Ojha - G. L. BITM, Greater Noida, India Dr Soumya Ranjan Mishra - SCE, KIIT University, Bhubaneswar, India

Dr. Dhananjoy Bhakta - IIIT Ranchi, India Dr. Mandeep K. Chawla - MCM DAV College for Women, Chandigarh, India Dr. Karl F. Bohringer - University of Washington, USA

Dr. Gitosree Khan - BP PoddarlMT, Kolkata, India Dr Anirban Mitra - Amity University, Kolkata, India Dr. Samya Muhuri - TIET, Patiala, India Dr. Kousik Dasgupta - KGEC, Kalyani, Nadia, West Bengal, India

Dr. Samir Kr Borgohain - NIT, Silchar, Assam, India Dr. Nassir Jabir Farhan AL-Khafaji - Technical Institute of Nasiriyah, Iraq Dr. Bhaskar Karn - Birla institute of Technology, Mesra, India Dr. Dhruba Jyoti Bora - MIT, Chittoor, Andhra Pradesh, India

Dr. Debashree Devi - IIIT, Guwahati, Assam, India Mr. Subham Bid - Associate at CB Tech, Deutsche Bank, Pune, India Miss. Shirsha Chakraborty - SSE, Marsh Mclennan, USA Dr. Sandip Das - GITS, Udaipur, Rajasthan, India Dr. Riya Sen - GITS, Udaipur, Rajasthan, India

Dr. Sumana Kundu - Dr. B. C. Roy Engineering College, Durgapur, India Dr. Ravi Kant Kumar - SRM University, Andhra Pradesh, India Dr. Prabhat Kumar Upadhyay - Birla Institute of Technology, India Prof.Dr. Ayan Banerjee - IIEST, India

All accepted papers will be published by Springer Book Series (Approval Pending).

The IEM UEM group is an acclaimed educational group amongst today's industry-centred academic training organisations. IEM has set sublime standards in addressing the technical and managerial resource shortage in the new era of dynamic globalisation. The IEM UEM group has risen to fame for its strong foundation in teaching and R&D in multifaceted areas. It aims to serve the future generation and the Nation through its commitment towards self-sufficiency and unmatchable excellence. University of Engineering & Management (UEM) aims to provide an international ambience and exposure with innovative teaching techniques and courses which are tailor-made (technical & soft skills) for the job market giving the students the winning edge and competitive advantage during placements.

The International Conference on Advanced Computing and Systems (AdComSys) will foster an excellent international forum for exchanging knowledge and the recent developments in theory, methodologies and applications in Artificial Intelligent (AI) systems, Internet of Things (IoT) systems, Cybersecurity and Blockchain systems and emerging computing techniques. The AdcomSys aims to encourage the intense dialogues between academia and industry to bridge the gap between scholarly research, industrial initiatives and governmental policymaking. AdComsys 2024 will attribute to the diverse spectrum of keynote addresses, technical tracks, panel discussions and industry exhibits where academia can view state-of-the-art findings from the trials and interoperability experiments. Furthermore, the industry will benefit from exposure to leading-edge research and an opportunity to interact and fraternize with academic researchers on real-world issues.

The purpose of AdComSys 2024 is to solicit original research and technical papers from researchers, scientists, academicians, industry professionals and students to report their experience, new ideas and research results about advanced computing and systems to discuss the practical challenges encountered and solutions adopted.

AdComSys 2024 will be held at the University of Engineering and Management, Kolkata, on June 26th-27th, 2024.

DOMAINS OF POTENTIAL EXPLORATION

Track 1. Advanced Computing

Emerging Computing

Cloud Computing Parallel Computing

Green Computing

Geoscience and Remote Sensing

 Human Centric Computing Cognitive Intelligence

Audio, Speech and Video

Quantum Computing

Processing

Cognitive Computing Grid Computing

Mobile Computing

→ Fog Computing

Quantum Cryptography Fuzzy Systems

Biomedical and Health Informatics
Bioinformatics

Bio-inspired Computing

Neuromorphic Computing

→ Digital Forensics

→ Dew Computing

Pervasive Computing

Industrial Informatics

Affective Computing

Evolutionary Computation

Track 2. Advanced Systems

Al Systems

Intelligent Systems → Explainable AI

Active Learning

Generative Models

NLP-basd Smart Systems → Big Data

Deep Learning Featured Learning

Al with Robotics

Generative Adversarial Network Robotics Systems

Data Mining

Reinforcement Learning Meta Learning

Al-based Image Processing

→ Soft Computing Data Analytics Systems

→ Automaton

IoT Systems

→ IoT in Healthcare → IoT in Agriculture Human Activity Recognition

→ IoT in Everything

Wireless Sensor Networks → AlloT

*IoT in Vehicular Network

IoT in Underwater Surveillance

→ IoT in Smart City → 5G & beyond 5G

→ Industry 4.0

→ IoT in Industry

Cyber Security Systems and Blockchain

Blockchain Authentication Smart Contracts

Crypt Analysis

Cybernetics

Cryptocurrency

Encryption Techniques

Blockchain-based Machine Learning

Security, Privacy, Attacks, and **Forensics**

Security in IoT

Dependable and Secure Computing

PAPER SUBMISSION LINK

https://cmt3.research.microsoft.com/

Authors are solicitated to contribute to the conference by submitting articles at the above link that illustrate research results, projects, surveying works and industrial experiences that describe significant advances in computing, communication and automation.

Submission Guideline The papers must be submitted ONLINE though CMT Link. Please follow standard author instructions of Springer conference for paper format

Publication: All accepted papers will be published in Springer Nature book series "Studies in Computational Intelligence" (Approval Pending). **Mode of Conference: Hybrid mode**

IMPORTANT DEADLINES

Full Paper Submission Open:	28th August 2023
Full Paper Submission:	6th December 2023
Acceptance Notification:	6th March 2024
Early Bird Registration:	25th March 2024
Last Date of Registration:	15th April 2024
Final Camera Ready Paper	1st May 2024
Submission of Copyright:	1st May 2024
Date(s) of Conference	26th & 27th June 2024

ORGANISING COMMITTEE

*Chief Patron

Prof. Dr. Satyajit Chakrabarti - Chancellor (University of Engineering and Management, Kolkata)

Prof. Dr. Sajal Dasgupta - Vice Chancellor (University of Engineering and Management, Kolkata) Prof. Dr. Satyajit Chakrabarti - Pro-Vice Chancellor (University of Engineering

and Management, Kolkata) Prof. Dr. Sukalyan Goswami - Registrar (University of Engineering and Management, Kolkata)

Prof. Dr. Rajashree Paul - Deputy-Dean (University of Engineering and Management, Kolkata) Prof. Dr. Kamakhya Prasad Ghatak - Dean-Engineering (University of

Engineering and Management, Kolkata) Prof. Dr. Rajiv Ganguly - Dean-Science (University of Engineering and Management, Kolkata)

Prof. Dr. Abir Chatterjee - Dean-Research (University of Engineering and Management, Kolkata)

* General Chair Prof. Dr. Weiping Ding (Deputy Dean of School of Information Science and

Chandannagar, Hooghly, West Bengal, India)

Technology, Nantong University, Nantong, Jiangsu, China) Prof. Dr. Shouvik Chakraborty (Department of Computer Science & Technology, > Women's Polytechnic, Chandernagore, Government of West Bengal,

Prof. Dr. Maumita Chakraborty (Department of Computer Science and ▶ Technology & Computer Science and Information Technology, University of **Engineering and Management Kolkata**)

*Convener

*Co-Convener

*Technical Chair

Prof. Dr. Maumita Chakraborty (University of Engineering and Management ^{*} Kolkata, India)

Prof. Dr. Subhalaxmi Chakraborty (University of Engineering and Management

Prof. Dr. Sudipta Basu Pal (University of Engineering and Management Kolkata,

Prof. Dr. Chiradeep Mukherjee (University of Engineering and Management Kolkata, India)

Prof. Sankhadeep Chatterjee (University of Engineering and Management Kolkata, India)

Prof. Dr. Danilo Pelusi (University of Teramo, Faculty of Communication Sciences, Teramo, Italy)

→ Prof. Dr. Valentina Emilia Balas (Aurel Vlaicu University of Arad, Romania) Prof. Dr. Amlan Chakrabarti (A.K.Choudhury School of Information Technology) **University of Calcutta**

Prof. Dr. Asit Kumar Das (Department of Computer Science and Technology, Indian Institute of Engineering Science and Technology, Shibpur)

*Industry Chair Mr. Sushovan Chanda (TCS Innovation Cell)

*Organizing Committee Members Dr. Srilekha Mukherjee (University of Engineering and Management Kolkata,

Dr. Panchali Datta Choudhury (University of Engineering and Management

Dr. Anirban Chakraborty (University of Engineering and Management Kolkata, ▶ Prof. Stobak Dutta (University of Engineering and Management Kolkata, India)

→ Prof. Prasenjit Das (University of Engineering and Management Kolkata, India) → Prof. Piyali Chandra (University of Engineering and Management Kolkata, India) → Prof. Subha Ghosh (University of Engineering and Management Kolkata, India)

→ Prof. Poly Sil Sen (University of Engineering and Management Kolkata, India) Prof. Pradipta Sarkar (University of Engineering and Management Kolkata, Prof. Sanjukta Mishra (University of Engineering and Management Kolkata,

Prof. Kamalika Bhowal (University of Engineering and Management Kolkata,

Prof. Sudipta Sikdar (University of Engineering and Management Kolkata, India) Dr. Rajendrani Mukherjee (University of Engineering and Management Kolkata,

▶ Dr. Tapas Guha (University of Engineering and Management Kolkata, India)

REGISTRATION

*Regular Author Student India/SAARC (INR) Foreigner (USD)

Early Bird - 5000

Early Bird - 4500 > Early Bird - 100+12% Tax and Bank charges ➤ Regular - 150+12% Tax and Bank charges **▶ Regular** - 5500

*Regular Author Academician, PhD Scholars India/SAARC (INR) Foreigner (USD)

> Early Bird - 200+12% Tax and Bank charges ▶ Regular - 250+12% Tax and Bank charges **→ Regular** - 6000

*Regular Author from Industry India/SAARC (INR) Foreigner (USD) **Early Bird** - 7000 > Early Bird - 200+12% Tax and Bank charges

▶ Regular - 8000 ▶ Regular - 250+12% Tax and Bank charges *Only Attending or Accompanying India/SAARC (INR) Foreigner (USD)

Early Bird - 2500 > Early Bird - 80+12% Tax and Bank charges **▶ Regular** - 2500 → Regular - 80+12% Tax and Bank charges **Contact Us**

Dr. Chiradeep Mukherjee - 9804244362 Dr. Subhalaxmi Chakraborty - 7003720703 Prof. Sankhadeep Chatterjee - 8910874737

Dr. Sudipta Basu Pal - 9674335060