



Adcomsys 2024

First International Conference on Advanced Computing Systems

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/





1st May 2024



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. 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. Obermayer - KTU, Netherland 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 PoddarIMT, 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

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 selfsufficiency 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: Emerging Computing

Cloud Computing Parallel Computing

Green Computing

Geoscience and Remote Sensing

Human Centric Computing

Cognitive Intelligence Audio, Speech and Video

Processing

Track 2: Al Systems

Quantum Computing

Intelligent Systems

Generative Models

Explainable AI

→ Big Data

Active Learning

→ Fog Computing Mobile Computing

→ Grid Computing

Al with Robotics

Featured Learning

Robotics Systems

→ Deep Learning

→ Data Mining

→ AlloT

Cognitive Computing

Quantum Cryptography

Fuzzy Systems

Bio-inspired Computing

Generative Adversarial Network

Biomedical and Health Informatics

→ Bioinformatics

→ Dew Computing

Digital Forensics

Pervasive Computing

Industrial Informatics

Affective Computing

Evolutionary Computation

Neuromorphic Computing

Al-based Image Processing

Reinforcement Learning Meta Learning

→Soft Computing → Data Analytics Systems

→ Automation

Track 3: IoT Systems

Human Activity Recognition

NLP-based Smart Systems

IoT in Healthcare → IoT in Agriculture

IoT in Everything

Smart Contracts

Crypt Analysis

Cybernetics

→ IoT in Vehicular Network

→ IoT in Underwater Surveillance Wireless Sensor Networks

→ IoT in Smart City → 5G & beyond 5G → Industry 4.0

→ Security in IoT

Security, Privacy, Attacks, and

→ IoT in Industry

Track 4: Cyber Security Systems and Blockchain

Blockchain Authentication

Cryptocurrency

→ Encryption Techniques

Blockchain-based Machine Learning Dependable and Secure Computing

PAPER SUBMISSION LINK

https://cmt3.research.microsoft.com/AdComSys2024

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 published Springer Book Series accepted will be papers by (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:

Date(s) of Conference 26th & 27th June 2024 ORGANISING COMMITTEE

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)

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

*** General Chair**

Technology, Nantong University, Nantong, Jiangsu, China) Prof. Dr. Shouvik Chakraborty (Department of Computer Science & Technology,

> Women's Polytechnic, Chandernagore, Government of West Bengal, Chandannagar, Hooghly, West Bengal, India) Prof. Dr. Maumita Chakraborty (Department of Computer Science and

> Technology & Computer Science and Information Technology, University of

*Convener

Kolkata, India) *Co-Convener

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

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

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

Prof. Sankhadeep Chatterjee (University of Engineering and Management

Prof. Dr. Chiradeep Mukherjee (University of Engineering and Management

Kolkata, India)

*Technical Chair 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)

Engineering and Management Kolkata)

*Finance Chair

▶ Mr. Indraneel Banerjee (University of Engineering and Management Kolkata) 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. Sanjukta Mishra (University of Engineering and Management Kolkata,

Prof. Pradipta Sarkar (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

▶ Regular - 5500

Early Bird - 5000

▶ Regular - 6000

India/SAARC (INR) Foreigner (USD) **Early Bird** - 4500 → Early Bird - 100+12% Tax and Bank charges

→ Regular - 150+12% Tax and Bank charges *Regular Author Academician, PhD Scholars India/SAARC (INR) Foreigner (USD)

*Regular Author from Industry

India/SAARC (INR) Foreigner (USD) **Early Bird** - 7000 → Early Bird - 200+12% Tax and Bank charges

▶ Regular - 8000 Only Attending or Accompanying

India/SAARC (INR) Foreigner (USD)

Early Bird - 2500

→ Regular - 2500

➤ Early Bird - 80+12% Tax and Bank charges

▶ Regular - 80+12% Tax and Bank charges

Contact Us

Dr. Chiradeep Mukherjee - 9804244362

→ Early Bird - 200+12% Tax and Bank charges

→ Regular - 250+12% Tax and Bank charges

→ Regular - 250+12% Tax and Bank charges

Dr. Subhalaxmi Chakraborty - 7003720703 Prof. Sankhadeep Chatterjee - 8910874737

Dr. Sudipta Basu Pal - 9674335060