



# ICRAI – 2024


## International Conference on Responsible Artificial Intelligence




Organized by  
**Mangalore University**  
in Association with  
**Cardiff Metropolitan University**  
United Kingdom (UK)

 <p>ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ <b>Mangalore University</b></p>	 <p><b>CANARA</b> ENGINEERING COLLEGE</p>	 <p><b>PRESIDENCY</b> UNIVERSITY</p>	
 <p>Cardiff Metropolitan University</p>	 <p>Prifysgol Metropolitan Caerdydd</p>	 <p>University of South Wales Prifysgol De Cymru</p>	 <p>Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David</p>

**December 16th – 17th, 2024**



Lecture Notes  
in Networks  
and Systems



**Publications**



**Venue:**  
Mangalagangothri Campus, Mangalore  
University, Mangalore, Karnataka, India – 574199

[www.mangaloreuniversity.ac.in](http://www.mangaloreuniversity.ac.in)  
[www.muicmureached.com](http://www.muicmureached.com)

# About The Conference

Artificial Intelligence technologies are advancing rapidly and there is paradigm shift with generative AI technologies. ChatGPT like Large Language Models (LLMs) are taking the world by storm. And in a way AI technologies are getting a negative coverage due to its use and impact in different domains e.g. use of ChatGPT by students for writing assignments. Therefore, governments, industry and researchers are pushing for more responsible, transparent and equitable AI solutions. In wider context, they want AI technologies which can benefit the humans, society and economy in general. There are many invest-

AI consortium to promote responsible AI. Similarly EU is currently drafting an AI Act to regulate out of control AI applications. This proposed conference welcomes original research and innovation publications on the impact of AI on individuals, societies, showcase responsible AI solutions and review of regulatory landscape of AI in the future.

Through sharing and networking, International Conference on Responsible Artificial Intelligence (ICRAI) 2024 will provide an opportunity for researchers, practitioners and educators to exchange research evidence, practical experiences and innovative ideas on issues related to the Conference theme.

Please consider submitting to this conference. We are interested in the entire range of concepts from theory to practice, including case studies, works-in-progress, and conceptual explorations.

## About Mangalore University

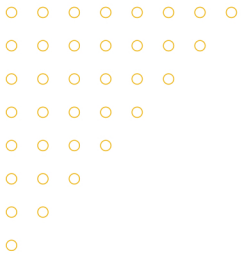
Mangalore University was established in 1980 to fulfil the aspirations of the people of the undivided Dakshina Kannada and Kodagu districts of Karnataka. The University's campus, Mangalagangothri, is situated about 20 km southeast of the coastal town of Mangalore, offering a scenic view of the Nethravathi River merging with the Arabian Sea on one side and the misty Western Ghats on the other. This picturesque setting enhances the educational pursuits of the Dakshina Kannada and Udupidistricts. Since its founding, Mangalore University has grown significantly, currently comprising over 150 affiliated degree colleges, six constituent colleges, and five autonomous colleges under its jurisdiction.



The University hosts 28 departments offering 42 postgraduate programs and 36 PhD programs. Mangalore University is nationally and internationally recognised for its excellence in research activities. The University campus houses some research centres like Microtron, CARER, CARRT, DST-PURSE, IBM Incubation Centre and the University is now setting up a state of the Art Centre of Excellence in AI. For more details: <https://www.mangaloreuniversity.ac.in>



Live Streaming on: [www.mucmureached.com](http://www.mucmureached.com)



**ICRAI-2024** invites eminent academicians, scientists, researchers, industrialists, technocrats, government representatives, social visionaries and experts from all strata of society to work together for more meaningful and professional outcome. The ICRAI team plans to hold workshops/special sessions on various areas of expertise, in any of the tracks based on related theme. The Workshops/Special Sessions will be chaired by experts from different fields.

### **Scientific Programme**

The scientific programme of the conference will include keynote addresses, invited talks, oral presentations of contributed papers, panel discussions, and technical exhibitions. The scientific thematic areas to be covered at the congress are listed below:

#### **General Track: Responsible AI, AI Solutions, Generative AI, Policies and Regulations on AI etc..**

**Chair** : Dr. A M Khan, Mangalore University, Mangalagangotri 574 199, India.  
**Co-chair** : Dr. B H Shekar, Mangalore University, Mangalagangotri 574 199, India  
**Phone** : 09901752373  
**e-Mail** : amkhan@mangaloreuniversity.ac.in, bhshekar@mangaloreuniversity.ac.in

#### **Special Session: Computer Vision & Pattern Recognition Through Artificial Intelli-**

**Chair** : Prof. Dr. Sameer Khan; Presidency University, Bengaluru, Karnataka, India  
**Co-chair** : Dr. S. Pravinth Raja, Dr. L. Shakkeera, Dr. Robin Rohit V; Presidency University, Bengaluru, Karnataka, India  
**e-Mail** : deancse@presidencyuniversity.in, pravinth.raja@presidencyuniversity.in, sha-kkeera.l@presidencyuniversity.in, robinrohit.vincent@presidencyuniversity.in

#### **Special Session: Trends in Intelligent Computing and Data Science**

**Chair** : Dr. Uday Kumar K. Shenoy; Canara Engineering College, Bantwal-Karnataka, India  
**Co-chair** : Dr. Praahas Amin, Dr. H. Manoj T. Gadiyar, Dr. Basappa Kodada, Canara Engineering College, Mangalore  
**e-Mail** : ukshenoy@canaraengineering.in, praahas@canaraengineering.in, manojgadiyar@canaraengineering.in, basappabk@canaraengineering.in

#### **Special Session: Data Science Advancements in Securing Information Systems**

**Chair** : Dr. N Nasurudeen Ahamed, United Arab Emirates University, Al Ain, Abu Dhabi, United Arab Emirates  
**Co-chair** : Dr. Thangavel Murugan, United Arab Emirates University, Al Ain, Abu Dhabi, United Arab Emirates  
**e-Mail** : nasurudeenahamed@uaeu.ac.ae, thangavelm@uaeu.ac.ae



# Keynote/Invited Speakers



**Srikanth Shenoy**  
CEO, Coachbuddy.AI, India



**Prof. Jiaxiang Zhang**  
Professor of AI in the Department of  
Computer Science at Swansea University, UK



**Mike Edwards**  
AI Compliance Expert-British  
Standards Institute (BSI), UK



**Sapnil Bhatnagar**  
Technical Product Manager ,  
Insife , London UK



**Prof. Niranjana U C**  
Former Director,  
Manipal Dot Net Technologies, India



Live Streaming on: [www.mucmureached.com](http://www.mucmureached.com)

# Registration

The ICRAI 2024 registration fees are as follows, and must be paid in EURO/USD or in local currency as per the current exchange rate.

Category (Speakers/Authors) (with an accepted paper)	Early Bird: on or before Dec 05, 2024	Regular Registration: Dec 06, 2024 - Till Dec 10, 2024	Spot Registration: Dec 16, 2024
Full Time Students	150 .00	170.00	190.00
Faculty/ Research Scholars	170.00	190.00	210.00
Industry	190.00	210.00	230.00

## Registration Includes

- \* Two full days of expert insights from top-tier presenters.
- \* Certificate of Participation OR Presentation of Paper for a registered person only
- \* Inclusion in SCOPUS indexed Springer LNNS, if paper accepted and presented in the conference.
- \* To become IAASSE member please click here

## Important Information for Registration

- \* The deadline for registration can be seen in the important dates. It is important that at least one author per accepted paper registers on or before the deadline.
- \* Authors registration includes the submission of up to ten (10) pages for full paper.
- \* At least one author must register and need to attend the conference to present the paper in virtual mode.
- \* Participants/Attendees/Listeners are also invited to attend conference in virtual mode. Certificate of presentation shall be issued even if the paper is presented through virtual platform.
- \* IAASSE Members must mention their membership UID during registration and submit a copy of the membership card during conference.
- \* Non IAASSE Members please enter the code "IAASSEICRAI2024" as Membership UID in the registration portal.
- \* In no case, registration fee shall be refunded.

## Presentation in Virtual Mode

A virtual meeting platform is to be made available for all registered authors who intend to submit their work but are unable to attend the conference. Authors may register and present their paper through the virtual platform.

Authors shall be sent a Certificate of Participation, Conference Proceedings link and relevant literature by mail.



Live Streaming on: [www.mucmureached.com](http://www.mucmureached.com)

## Chief Patron

### Prof. P.L. Dharma

Hon'ble Vice Chancellor, Mangalore University

## Patrons

### Shri. K. Raju Mogaveera KAS

Registrar, Mangalore University

### Prof. Frank Lin

CSUSB, USA

### Prof. Jon Platts

Cardiff Metropolitan University, UK

### Prof. Jiaxiang Zhang

Swansea University, UK

### Prof. Vijayan Immanuel

Hon'ble VC, Presidency University, Bangalore

### Dr. Manjappa

Director, R&D, Sahyadri Engineering College, Mangalore

### Dr. Nagesh H R

Principal, Canara Engineering College

## Program Chairs

**Prof. A.M. Khan**, Mangalore University, India

**Prof. Mohammed Sameeruddin Khan**, Presidency University, India

**Prof. Chaminda Hewage**, Cardiff Metropolitan University, UK

**Dr. Kapilan Radhakrishnan**, University of Wales Trinity Saint David, UK

**Dr. Vijey Thayananthan**, University of South Wales, UK

**Prof. Andrew Ware**, University of South Wales, UK

**Dr. Thangavel Murugan**, United Arab Emirates University, UAE

**Dr. Uday Kumar K. Shenoy**, Canara Engineering College, India

## Organizing Chairs

**Prof. B.H. Shekar**, Mangalore University, India

**Dr Angesh Anupum**, Cardiff Metropolitan University, UK

**Dr. S. Pravinth Raja**, Presidency University Bangalore, India

**Dr Seena Joseph**, University of Wales Trinity Saint David, United Kingdom (UK)

**Dr. N Nasurudeen Ahamed**, United Arab Emirates University, UAE

**Dr. Praahas Amin**, Canara Engineering College, India

**Dr. Rebecca Peters**, University of South Wales, UK

## Organizing Committee

**Prof. Manjaiah D H**,  
Dean, Science, Mangalore University

**Prof. Naveen kumar S K**,  
Chairperson, Electronics, Mangalore University

**Prof. H L Shashirekha**,  
Computer Science, Mangalore University

**Mr. Naveenchandra kumar**,  
Assistant Professor, Electronics, Mangalore University

**Mr. Prakasha M**,  
Assistant Professor, Computer Science, Mangalore University

**Mr. Narayanaprakash**,  
Assistant Professor, Electronics, Mangalore University

**Prof. Sharmila kumari**  
Vice Principal, PA College of Engineering, Mangalore

**Dr. Chandana B R**,  
Associate Professor, Sahyadri Engineering College, Mangalore

**Convenor**  
**Prof. A M Khan**

**Co-Convenor**  
**Prof. B H Shekhar**



Live Streaming on: [www.mucmureached.com](http://www.mucmureached.com)

# Accommodation

## Accommodation in guest houses:

Efforts will be made to reserve rooms in the guest houses of Mangalore University. The tariff of these guest houses will be about Rs. 500 to Rs. 1,000/day/person on a sharing basis.

Those requiring such accommodation should inform well in advance by mail (icrai24@mangaloreuniversity.ac.in). The last date for receiving requests for accommodation booking in guesthouses is December 12, 2024.

## Reservation in Hotels (Participants may also book their own accommodation):

Tariff per night (Range)	Hotel	Address & Contact details
Rs. 5,000-10,000	Hotel Taj Vivanta	Old Port Rd, Bunder, Mangalore, Karnataka - 575001. Phone: +91 8246660420. www.vivantahotels.com
	Hotel Ocean Pearl	Navabharath Circle, Kodialbail, Mangalore Karnataka – 575003. Phone: +91 8242413800. www.theoceanpearl.in/mangalore
	Hotel A J Grand	Bunts Hostel Rd, Bolor, Hampankatta Mangalore, Karnataka– 575003. Phone: +91 8242862400. www.ajgrand.com
Rs. 2,500 - 5,000	Hotel Poonja International	K.S. Rao Road, Mangalore, Karnataka- 575 001. Phone: +91 9141955527 www.hotelpoonjainternational.com
	Hotel Srinivas the Verda	GHS Rd, Bhavathi, Hampankatta, Mangalore Karnataka 575001. Phone: +91 9686236496 www.theverda.com/srinivas
	Hotel Sai palace	KSR Road, opposite City Center Mall Hampankatta, Mangalore, Karnataka 575001. Mob: +91 9930809900 www.saipalacehotels.com
Rs. 1,000-2,500	Hotel Navarathna palace	VRCR+HP8, Hampankatta, Mangalore, Karnataka 575001. Phone: +91 9980021104 www.navaratnapalace.com
	Hotel Manorama	KSR Road, near city centre, Hampankatt Mangalore, Karnataka- 575001. Phone: +91 8242440306
	Hotel Prestige	Collectors Gate, Junction, Balmatta, Mangalur Karnataka – 575002. Phone: +91 7813910605
	Hotel Suman residency	Near Bendorewell Junction, Kankanady Balmatta Road, Mangaluru, Karnataka 575002 Phone: +91 8242439700
Below Rs. 1000	Hotel Highland Residency	Millennium Towers, Falnir Rd, opp. Highland Hospital, Falnir, Kankanady, Highland, Mangalur Karnataka 575002. Phone: +91 8242433961. www.highlandresidency.in

### Note:

The delegates are requested to book any of the above hotels directly. Transport for the participants will be arranged from the vicinity of the above hotels to travel to the venue of the conference. Those who plan to stay in other hotels must come to the designated pick-up points at a scheduled time.



# How to Reach Mangalore?



The Mangalore International Airport is located nearly 10 km away from the city and is connected to many cities in India. Direct flights are available from Mangalore to Mumbai, Delhi, Hyderabad, Bangalore, Pune, Chennai and several Gulf countries. Taxi services are available from the airport to the city, and the cost is about Rs. 700. For delegates coming from north Indian states, it is recommended to take a flight to Mumbai or Bengaluru and then take a connecting flight to Mangalore.



Mangalore is well connected to other cities, with direct train services available to many major stations in India. Mangalore has two railway stations: (i) Mangalore Junction and (ii) Mangalore Central.



Smooth national highways link to places like Bangalore, Goa, Mysore, Mumbai, and cities of Kerala. Air-conditioned bus coaches operate from these places into and out of Mangalore.

## Mangaluru to Mangalore University Direction Map

