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**School of Computing**

Department of Artificial Intelligence & Machine Learning

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Special Session on

# AI and Computing for Science Engineering and Society

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## Theme

This session unites advances in artificial intelligence and computing that serve scientific discovery engineering practice and societal impact. Emphasis is placed on methods systems and evaluations that connect data feature engineering learning algorithms and deployment across cloud edge and IoT environments. Submissions that bridge theory with implementable systems and cross disciplinary applications are encouraged.

## Scope

Contributions may include original research system designs datasets benchmarks reproducibility studies and real world case studies that advance

- end to end AI development from feature creation training and inference to responsible deployment monitoring and governance
- reliable efficient and privacy aware intelligence operating under latency energy security and cost constraints cross sector validations showing measurable outcomes and lessons learned for science engineering and society

## Topics of interest

- Machine learning and deep learning
- Generative AI and large language models
- Retrieval augmented generation and knowledge grounding
- Multimodal learning and sensor fusion
- Time series forecasting and anomaly detection
- Causal inference and causal discovery
- Physics informed machine learning
- Data centric AI and synthetic data
- Explainable AI and model transparency
- Robust and trustworthy AI
- Privacy preserving learning and differential privacy
- Federated and collaborative learning
- Adversarial machine learning and model security
- Model evaluation auditing and monitoring
- Efficient training and inference and model compression
- High performance and distributed AI
- Edge AI and embedded intelligence
- Internet of things and real time analytics
- Digital twins and simulation
- Computer vision and image understanding
- Natural language processing and speech technology
- Human AI interaction and co creation
- Accessibility and inclusive AI
- AI assisted software engineering and code intelligence
- Testing verification and validation for AI enabled systems
- Cyber physical systems and autonomous systems

- Robotics and human robot collaboration
- Healthcare analytics and clinical decision support
- Smart manufacturing and predictive maintenance
- Energy systems and smart grid analytics
- Climate and environmental informatics
- Fintech and risk analytics
- Education technology and learning analytics
- Data governance quality and lineage
- AI policy safety and impact assessment

## Expected outcomes

- deployable AI practices that respect real world constraints and risks
- shared artifacts datasets benchmarks and open tooling that improve reproducibility and comparability
- collaborations linking algorithms systems and domain stakeholders to accelerate impact

## Paper Submission Process:

Paper submission link:

https://cmt3.research.microsoft.com/MBUICCCT2025

**For details visit:**
https://ic3t.in/
Email: ic3t2025.mbu@gmail.com

**For any further queries related to this special session, please contact the Session chairs.**