**Conference Name:** Next-Generation Networks and Deployable Artificial Intelligence (NGNDAI-2025)

**Date:** 24th -26th April 2025

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**About NGNDAI-2025**

The International Conference on Next-Generation Networks and Deployable Artificial Intelligence (NGNDAI-2025) is a platform that brings together researchers, industry experts, and practitioners to explore cutting-edge developments in machine intelligence, communication systems, and related technologies. NGNDAI-2025 features diverse topics including artificial intelligence, machine learning, intelligent networks, robotics, and next-generation communication technologies such as 5G/6G and IoT. The conference aims to foster collaboration across academia and industry, promote innovation in intelligent systems and communication networks, and address emerging challenges in related areas. With its focus on future technologies, NGNDAI-2025 is poised to advance the state-of-the-art in intelligent systems and redefine the landscape of communication technologies.

This conference aims to provide a worldwide forum, where international participants can share their research knowledge and ideas on the recent and latest research in these areas and map out the directions for future researchers and collaborations. This will pave the way for undergraduate and postgraduate students to participate and learn new skills supported by the industry at large.

The conference has featured keynote talks, five technical sessions on different subject tracks, an industry track, the inaugural and the valedictory sessions and contributed papers. The goal of the conference is to become a premier venue for researchers and industry practitioners to share new ideas, research results and their enriching experiences in various fields.

The scope of NGNDAI-2025 covers the following themes but not be limited to:

Track 1: Artificial Intelligence and Machine Learning

Track 2: Software Defined Smart Computer Networks

Track 3: Cognitive Computing and Brain-Inspired Systems

Track 4: Quantum Computing and Communications

Track 5: Advances in the IoT, Fog and Edge Computing and its Applications

Researchers especially from R&D agencies, industries and start-ups along with front-line academic research workers are kindly requested to submit and present their work.

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**Call for Papers**

The International Conference on Next-Generation Networks and Deployable Artificial Intelligence (NGNDAI-2025) is a platform that brings together researchers, industry experts, and practitioners to explore cutting-edge developments in machine intelligence, communication systems, and related technologies. The conference will bring together leading researchers, engineers and scientists in the domain of interest from around the world.

***CONFERENCE SCOPE***

The scopes of NGNDAI-2025 include the following themes, but are not limited to:

**Track 1: Artificial Intelligence and Machine Learning**

This track of the conference focuses on advancements in Artificial Intelligence (AI) and Machine Learning (ML), covering a wide range of cutting-edge topics. Key areas include activity detection, biometric systems for forensics, and compressed image and video analytics. The track highlights the role of deep learning in computer vision, medical image analysis, and human-computer interaction. Topics like explainable AI, generative AI, and large language models will also be explored, along with computational imaging, document processing, and motion tracking. This track provides a comprehensive look at the impact of transformative AI on modern technology, driving innovation across various industries.

* Activity Detection/ Recognition
* Biometrics, Forensics, Content Protection
* Compressed Image/ Video Analytics
* Deep Learning for Computer Vision
* Document and Synthetic Visual Processing
* Explainable AI and Generative AI
* Face, Iris, Emotion, Sign Language and Gesture Recognition
* Medical Image Analysis
* Human Computer Interaction
* Mathematical models of AI
* Large Language Models

**Track 2: Software-Defined Smart Computer Networks**

This Track focuses on Software-Defined Smart Computer Networks, exploring the transformative role of Software Defined Networking (SDN) in enhancing modern networks. It covers architectures for SDN, Network Function Virtualization (NFV), and their integration with IoT for intelligent traffic management and dynamic resource allocation. Topics include security, privacy, and performance monitoring in SDN-based smart networks, as well as edge and fog computing integration. The track also addresses SDN in 5G/6G, programmable data planes, and the role of AI in self-organizing networks. Emphasis is placed on future trends, big data analytics, Digital twins and virtualized environments, and green & sustainable computing in software-defined environments.

* Architectures for Software Defined Networking (SDN) in Smart Networks
* Network Function Virtualization (NFV) and its Role in Smart Networks
* Intelligent Traffic Management using SDN
* Integration of IoT with Software Defined Networks
* Security and Privacy in SDN-based Smart Networks
* Dynamic Resource Allocation in SDN-enabled Smart Networks
* Edge and Fog Computing Integration with Software Defined Networks
* Programmable Data Planes and Custom Network Protocols
* SDN in 5G/6G and Next-generation Wireless Networks
* Performance Monitoring and Analytics in SDN-driven Smart Networks
* Self-Organizing Networks using SDN and AI
* Challenges and Future Trends in SDN-based Smart Networks
* Programmable Data Planes and Custom Network Protocols
* SDN-based Quality of Service (QoS) Management
* Interoperability and Standardization in Software Defined Networks
* Performance Monitoring and Analytics in SDN-driven Smart Networks
* Big data analytics in software-defined environments
* Digital twins and virtualized environments in software-defined systems
* Green and sustainable computing in software-defined environments

**Track 3: Cognitive Computing and Brain-Inspired Systems**

This Track delves into Cognitive Computing and Brain-Inspired Systems, exploring the intersection of neuroscience and computational intelligence. It covers topics such as cognitive foundations of big data, cognitive robotics, and neuroinformatics. The track also highlights advancements in pattern recognition, cognitive decision theories, man-machine communication, and neuro-inspired learning algorithms. With a focus on computational neurology, fuzzy logic, and software simulations of the brain, this track examines how brain-inspired models are shaping fields like neurocomputing and perception systems. DNA and genome cognition further extend its impact, fostering interdisciplinary discussions on cognition-driven technology.

* Cognitive robotics
* Cognitive decision theories
* Cognitive man-machine communication
* Software simulations of the brain
* Computational neurology
* Fuzzy/rough sets/logic
* Neuro-Inspired Learning Algorithms
* Perception and Sensory Systems
* DNA and genome cognition

**Track 4: Quantum Computing and Communications**

This Track delves into the transformative field of Quantum Computing and Communications, exploring cutting-edge advancements and applications. Key topics include Quantum Cryptography, focusing on secure communication protocols, and Quantum Networking, which aims to revolutionize data transmission and communication systems. The track also covers Topological Quantum Computing, a promising approach for fault-tolerant quantum operations, as well as the integration of Quantum-Classical Systems for hybrid computational models. Additionally, Quantum Machine Learning merges quantum computing with AI to unlock new potentials in data processing and pattern recognition, offering future-forward solutions across industries.

* Quantum Cryptography
* Quantum Networking
* Topological Quantum Computing
* Quantum-Classical Systems
* Quantum Machine Learning

**Track 5: Advances in the IoT, Fog and Edge Computing and its Applications**

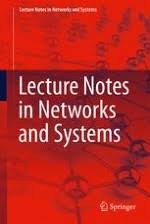
This Track focuses on the developments in IoT, Fog, and Edge Computing, highlighting their architectures and applications. Key topics include IoT device networking and communication protocols, Fog and Edge Computing architectures, and the role of Federated Learning in distributed machine learning. The track explores energy-efficient and sustainable solutions for IoT and edge systems, emphasizing security, privacy, and blockchain-based consensus mechanisms. It also discusses AI-powered decision-making, data management, and data fusion in fog/edge systems. Additionally, this track will cover the integration of Edge Computing in 5G and beyond, showcasing its future potential across industries.

* IoT device networking and communication protocols
* Fog and Edge Computing Architectures
* Federated learning and distributed machine learning in the fog and on the edge
* Storage and data management platforms for fog/edge
* Energy Efficiency and Sustainability in IoT and Edge Systems
* Security and Privacy in IoT, Fog, and Edge Computing
* Blockchain and Distributed Consensus in Fog, and Edge Systems
* AI-powered decision-making in IoT applications
* Data fusion and processing in fog/edge systems
* Edge Computing for 5G and Beyond

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**Publication**

The International Conference on Next-Generation Networks and Deployable Artificial Intelligence (NGNDAI-2025) proceedings will be submitted for consideration to Lecture Notes in Networks and Systems (Web of Science, SCOPUS, INSPEC, WTI Frankfurt eG, zbMATH and SCImago).

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Selected and extended versions of research papers will be forwarded for publication as a Special Issue in Scopus and SCI/SCIE-indexed Journals of repute.

**Best Paper Awards**

The Best Paper Award is presented to the authors who have written the best paper among those who appear in the conference proceedings. Recipients are presented with a souvenir and a certificate that describes the award. The awards are announced and bestowed during the conference valedictory session.

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**Submission Guidelines**

The submission of the papers shall be accepted in the Springer format available on <https://typeset.io/formats/springer-conferences/default-format-for-springer-conferences/f8d71f9027f449abb4f73d0a7bf6d340>

The papers must not exceed a page limit of 12-14 pages in any manner in the single page - single column format supported by Springer. Any paper exceeding this page limit will be outright rejected. The papers are to be submitted at the submission link <https://cmt3.research.microsoft.com/NGNDAI2025> within the last dates mentioned in the conference paper schedule. All further enquiries about the status of the paper can be made at the conference email – [ngndai@mnnit.ac.in](mailto:ngndai@mnnit.ac.in).

*Review Process*

The review process is double-blind. Therefore, please do not mention your names and affiliations of institutions/companies in your submission. Also, do not include funding sources or other acknowledgements in your papers.

Each paper will be reviewed by at least three regular PC members or two senior PC members. The acceptance decisions will take into account paper novelty, technical depth, elegance, practical or theoretic impact, and presentation based on the following parameters:

• Originality: The paper presents a new idea, issue and application; discusses existing research with its possible research gaps and a suggestive mechanism to fill it up using a new strategy.

• Engaging: The presentation format engages the audience most creatively, or has a great potential to attract conference attendees by pinpointing the needs of the research community.

• Significant: The paper must have incorporated the issues important to resolving the inefficiencies of the existing techniques for relevant problems, and to provide solutions most simply and effectively.

• Quality: Claims are supported by sufficient data; it should be based on relevant experiments and simulations with appropriate theoretical foundations based on published literature. Limitations of the conducted experiments are to be described comprehensively.

• Clear: The intended outcomes of the paper are simple and easily understood.

• Relevant: The paper addresses one or more of the themes of the conference.

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To be updated!

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**Schedule**

The call for papers follows the following paper schedule:

Abstract Submission Deadline 15th December 2024

Notification of Acceptance 15th January 2025

Author’s Registration (Deadline) 10th February 2025

NGNDAI-2025 Conference Dates 24th - 26th April 2025

Click here to download the detailed schedule: ….

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**Keynote Speakers**

To be updated!

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**Registration**

**To be updated!**

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***Registration Fee***

* Indian Participants from Academic Institutes: INR 10000.00 + 18% GST  = INR 11800/-
* Indian Industry Participants: INR 12000 + 18% GST = INR 14160/-
* Foreign Participants (Academic and Industry): USD 300
* Additional ticket for attending the conference along with conference dinner: INR 3000
* More than one accepted paper per registered person will be allowed registration at an additional cost of INR 5000

*Please note that any paper that is not covered by the registration fee will not be published in the Conference Proceedings.*