



# International Conference on Artificial Intelligence: Theory and Applications (AITA 2021)

**Date: 23<sup>rd</sup> – 24<sup>th</sup> December 2021**

**National Institute of Technology Patna, Bihar, India**



## Registration Fees:

Category	Indian Participants (INR)	Foreign Participants (USD)
Students (UG/PG/Research Scholar)	6000/-	\$150
Academicians	8000/-	\$250
Industry Persons	10,000/-	\$300
Extra Paper	5000/-	\$100
Extra Pages (Per Page)	1000/-	\$25
Only Attending	2000/-	\$50

## General Queries:

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## Account Details for Registration:

NITP CF A/c :  
 50433562364  
 IFSC Code: IDIB000B810

## Organizing Committees:

### Chief Patron:

- Prof. P K Jain, Director, N.I.T Patna, India

### Patron:

- Prof. S K Verma, Deputy Director, N.I.T Patna, India

### Organizing Chairman(s):

- Dr. Bikash Ch. Sahana, HOD (ECE), N.I.T Patna, India
- Dr. Ritesh K. Mishra, Assoc. Professor (ECE), N.I.T Patna, India

### Organizing Co-Chairman:

- Dr. Jayanta Ghosh, Assoc. Professor (ECE), N.I.T Patna, India

### Organizing Secretary(s):

- Dr. Subodh Srivastava, Asstt. Professor (ECE), N.I.T Patna, India
- Dr. Sangeeta Singh, Asstt. Professor (ECE), N.I.T Patna, India

### Joint Organising Secretary(s):

- Dr. Rajeev Arya, Asstt. Professor (ECE), N.I.T Patna, India
- Dr. Bambam Kumar, Asstt. Professor (ECE), N.I.T Patna, India
- Dr. Richa Agarwal, Asstt. Professor (ECE), N.I.T Patna, India

**About the Conference:** International Conference on Artificial Intelligence: Theory and Applications (AITA-2021) will be a leading conference for bringing students, researchers, faculty members and industry experts under one umbrella for betterment of society through innovation in interdisciplinary area. It provides interactive platform for presenting new advances and innovative research results in the fields of Artificial Intelligence and its applications. Various tracks will cover both application and current research trends in the field of artificial intelligence.

**About NIT Patna:** National Institute of Technology Patna is the 18th National Institute of Technology created by the Ministry of H.R.D. Government of India after rechristening the erstwhile Bihar College of Engineering Patna on 28. 01. 2004. NIT Patna marked its humble beginning in 1886 with the establishment of pleaders survey training school which was subsequently promoted to Bihar College of Engineering Patna in 1924. This made this institute the 6<sup>th</sup> Oldest Engineering Institute of India. The institute is situated on the south bank of holy river Ganges behind Gandhi Ghat, one of the most important and reverential place of Patna. The Gandhi Ghat is associated with the immersion of ashes of father of the Nation Mahatma Gandhi in the river Ganges. The campus has a picturesque river view with historic building presenting a spectacle of architectural delight and natural beauty.

## Call for Papers

The conference program will also include high level talks from invited speakers. Supplemented by contributed talks highlighting new research and perspective in AI domain. The conference chairpersons, along with the entire team cordially invite you to submit your latest original and unpublished research work/results in the field of Artificial intelligence and Applications. The upcoming conference to be held on December 23-24, 2021 at National Institute of Technology Patna, Bihar (India).

**AITA 2021 will be contemplating the two Modalities of participation: Face to face and Virtual.**

**All Accepted and presented papers will be published in SCOPUS Indexed book series Lecture Notes (Springer).**

**Selected papers from AITA-2021 would be considered for publication in Special Issue of Journal (SCI, SCIE and Scopus indexed).**

## Important Dates

Paper Submission Dead Line	15 May, 2021
Acceptance	05 September, 2021
Final Submission	25 September, 2021
Registration	26 September, 2021

## International Advisory/TCP Committee:

- Dr. Takako Hashimoto, Professor & Vice President, Director of International Center, Chiba University, Japan
- Dr. Thuy T. Le Professor & Department Chair ,  
  
• San José State University, California U.S.A.
- Dr. Rafael F. S. Caldeirinha, Professor & Head of Research Group, Instituto de Telecomunicações, Leiria, Portugal
- Dr Jacob Scharcanski, Professor, Instituto de Informática UFRGS - Av. Bento Goncalves, Brazil
- Dr. Basabi Chakraborty, Professor, Iwate Prefectural University, Japan
- Dr. Sunil Vadera, Professor, University of Salford, Manchester, UK
- Álvaro Rocha, Professor, ISEG, University of Lisbon, Portugal
- Dr. AfaqAhmad, Professor, Sultan Qaboos University, Muscat, Oman
- Dr.FelixAlbu, Professor,Valahia University of Targoviste, Romania
- Dr. Pavel Loskot, Associate Professor, ZJU-UIUC Institute, China
- Dr. John Healy, Assistant Professor, UCD College of Engineering and Architecture, Dublin, Ireland
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- Dr. Shamimul Qamar, Professor, King Khalid University, Saudi Arabia
- Dr. Dil Muhammad Akbar Hussain, Associate Professor, Aalborg University, Denmark
- Dr. Mohamed Sultan Mohamed Ali, Associte Professor, School of Electrical Engineering, Universiti Teknologi Malaysia

## National Advisory / TCP Committee:

- Dr. Selva Kumar Subramanian, Professor & Director, IIIT Una, Hamirpur, India
- Dr. Rajeev Srivastava, Professor & Dean (R&A), IIT(BHU), Varanasi, India
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- Dr. Jaypal Singh Ubhi, Professor, SLIET, Punjab, India
- Dr. Y Padma Sai, Professor, VNRV JIET, Hyderabad, India
- Dr. Ranjan Senapati, Professor, VNRV JIET, Hyderabad, India
- Dr. Rijwan Khan, Professor, ABES Institute of Technology, Ghaziabad, India
- Dr. Preetam Kumar, Associate Professor, IIT Patna, India
- Dr. Sanjeev Kumar, Principal Scientist, CSIR-CSIO, Chandigarh, India
- Dr. Anil Kumar Singh, Associate Professor, IIT (BHU), Varanasi, India
- Dr. Ravi Kumar J, Associate Professor, NIT Warangal, AP, India
- Dr. Shiru Sharma, Associate Professor, IIT (BHU), Varanasi, India
- Dr. Ashish Khare, Associate Professor, University of Allahabad, India
- Dr. Prabhat Kumar, Associate Professor, NIT Patna, India
- Dr. Gayadhar Pradhan, Associate Professor, NIT Patna, India
- Dr. Maheshwari Prasad Singh, Associate Professor, NIT Patna, India
- Dr. Bharat Gupta, Associate Professor, NIT Patna, India
- Dr. Rabindra Kumar, Associate Professor, NIT Patna, India
- Dr. Manoj Kumar Singh, Associate Professor, BHU, India
- Dr. Sudhan Majhi, Associate Professor, IIT Patna, India
- Dr. J P Singh, Assistant Professor, NIT Patna, India
- Dr. Amit Kumar Singh, Assistant Professor, NIT Patna, India
- Dr. Rakesh Ranjan, Assistant Professor, NIT Patna, India
- Dr. Niharika Kulshrestha, Assistant Professor, Patna Women's College, Patna, India
- Dr. Madhushi Verma, Assistant Professor, Bennett University, India
- Dr. R B Yadav, Assistant Professor, G B Pant Institute of Engineering and Technology, India
- Dr. Seemani Saha, Assistant Professor, NIT Patna, India
- Dr. Ashish Kumar Bhandari, Assistant Professor, NIT Patna, India
- Dr. Vimlesh Verma, Assistant Professor, NIT Patna, India
- Dr. Ambarish Mishra, Assistant Professor, NIT Patna, India
- Dr. Puli Kishore Kumar, Assistant Professor, NIT AP, India
- Dr. Sanjay Saxena, Assistant Professor, IIIT Bhuvaneshwar, India
- Dr. Pratik Chattopadhyay, Assistant Professor, IIT (BHU), Varanasi, India
- Dr. Vibhav Prakash Singh, Assistant Professor, MNNIT Allahabad, India

Original and unpublished research papers are invited in the field of following current tracks and sub-tracks, but not limited to:

<p><b>1. Artificial Intelligence and Embedded Systems</b></p> <p>Artificial Intelligence Machine Learning /Deep Learning Humanitarian Technology Neural Networks Fuzzy Logic Expert Systems Agents and Multi-agent Systems Natural Language Processing Data Mining Computational Optimization Robotics, Control and Automation Sentiment Analysis Quantum Computing High Performance Computing Distributed and parallel systems Cognitive Computing Grid Computing Optimization Embedded Computing Scalable Computing Human-centered Computing Mobile computing Computer Architecture and Systems Language Technologies and Information Retrieval Computational Intelligence System</p> <p><b>2. Computer Vision and Applications</b></p> <p>Machine Vision Soft-computing Human Computer Interaction Pattern Recognition Computer Vision Image Processing Action Recognition Geographic Information Systems (GIS) Video Analysis Medical Diagnosis Segmentation Techniques Augmented Reality Virtual Reality Bioinformatics and Machine Learning Datasets and Evaluation Medical, Biological and Cell Microscopy</p>	<p><b>3. Application of AI in Advanced Communication Networks</b></p> <p>Machine Learning and AI in Networking Network and System Security Network Management and Traffic Engineering Opportunistic Networks P2P Networks Pervasive Sensing and Socio-Technical Networks Cyber Physical Systems 5G Communication Physical Layer Communication Heterogeneous networks (Het-Nets) Cognitive radio and white-space networking Cloud computing Information/Content centric networks (ICN) Wireless Ad-hoc and sensor networks Systems and networks for smarter energy and sustainability Vehicular communications Smart Grid communications and networking Cognition and Cognitive Computing in Networking Online social networks Overlay communications, content distribution Microwave communication devices Millimeter wave communication devices Photonic antennas Satellite communications Wireless communications Underwater communications Cross layer design</p> <p><b>4. Application of AI in Microwave and Optical Fiber Communication</b></p> <p>High Power RF Microwave Devices, Circuits and Systems. RF MEMs, Metamaterial devices Microwave Imaging and Remote Sensing Antenna design Microwave communication devices Millimeter wave communication devices Filters Dielectric resonator antennas THz devices Microwave Absorber Microwave Integrated Circuits Computational Electromagnetics Photonics Waveguides and Devices Optical Fiber and optical networks</p>	<p>Free Space Optical Communication Hybrid RF/FSO System</p> <p><b>5. IoT Based Applications</b></p> <p>Internet of Things Block chain Big Data Analytics in Networking, including IoT Analytics Deep learning Datamining Data Analytics Mobile Applications Digital Transformation Social Computing Smart Cities Smart Grids and Energy Networks Sensing and Sensor Networks Ambient Assisted Living Smart Healthcare Intelligent Transportation Data Science Affective computing Agents and Multi-agent Systems Context-aware pervasive systems</p> <p><b>6. AI in VLSI Applications</b></p> <p>VLSI Design, Fabrication and characterization Nanostructure and Nano electronics Analog and Mixed Signal IC Design Design of Signal Processing Circuits using Analog Building Blocks FPGA based System Design Beyond CMOS Devices Green Electronics Steep switching transistors Low Power High Performance Robust Circuit Design System on Chip (SOC) and Semiconductor Technology</p> <p><b>7. Signal Processing and Applications</b></p> <p>Biomedical Signal Processing Speech Analysis Speech Enhancement Speech Recognition Keyword Spotting Speaker and Language Recognition Efficient Hardware Architectures for Speech Processing Algorithms RADAR Signal Processing Adaptive filters. Geophysical Signal Processing</p>
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