



International Conference on Advances in IoT, Security with AI (ICAISA-2023)

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Deen Dayal Upadhyaya College, University of Delhi, New Delhi, India

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Conference Program

<p>Day 1: Inaugural Session (Date: 24 March 2023 at 09.30 – 11:00 IST) Venue: Main Auditorium (Ground Floor)</p>
<p>Chief Guest: Dr. Rajendra Pratap Gupta, Chairman, Dynamic Coalition on Internet & Jobs, United Nations IGF, Former Member, NEP & Former Advisor to Union Health Minister, Govt. of India</p>
<p>Online Keynote Address: Role of AI and ML in evolution of IoT and its future by Dr. Animesh Mishra, Distinguished Platform Architect, NVIDIA Corporation, Santa Clara, USA</p>
<p>Guest of Honor: Mr. M. Balasubramaniam, CEO Stratifinity Inc, Co-Founder of Ken42, Chairman IIIT Sricity & Ex. Chairman, NASSCOM GCC</p>
<p>Guest of Honor: Prof. Girija Chetty, University of Canberra, Australia</p>
<p>Presided By: Prof. Balram Pani, Dean of Colleges, University of Delhi, Delhi</p>
<p>High Tea (11:00 – 11:30 IST)</p>

Day 1, Parallel Session: Advances in Internet of Things and its Applications

(Date: 24 March 2023 at 11.30 – 13:00 IST)

Venue: Room No. 509

Invited Talk: IoT Security: Challenges, Solutions & Future Prospects

Time: 11.30-12.00 IST by

Prof. Madan Mohan Tripathi, Director General, NIELIT, MeitY, Gol

Session Chair: Dr. Ravneet Kaur

Paper ID	Title	Authors
0043 12.00-12.10 IST	Performance analysis of selection and migration for virtual machines in cloud computing	Rashmi Sindhu, Vikas Siwach, Harkesh Sehwat
0068 12.10-12.20 IST	IoT Based Smart Drainage System	Akshansh Jha, Pitamber Gaire, Ravneet Kaur, Monika Bhattacharya
0108 12.20-12.30 IST	IoT-based Smart Farming for Sustainable Agriculture	Geetan Manchanda, Bhumika Papnai, Aadi Lochab and Shikha Badhani
0112 12.30-12.40 IST	Inter compatibility of IoT Devices using Matter: Next-Generation IoT Connectivity Protocol	Sharat Singh
0168 12.40-12.50 IST	Intrusion Detection System for Internet of Medical Things	Priyesh Kulshrestha, T V Vijay Kumar and Manju Khari
Industry Presentation 12.50-13.00 IST	Next Generation Mobile Backhaul essential for 5G technology	Kundan Kumar, Nokia Networks, Bengaluru

LUNCH (13:00 – 14:00 IST)

Venue: Lobby at Ground Floor (Block-A)

Day 1, Parallel Session: Advances in Internet of Things and its Applications

(Date: 24 March 2023 at 11.30 – 13:00 IST)

Venue: Room No. 307

Invited Talk: Robust Analysis of Pipeline NoC RTL by Synopsis solution “RTL Architect” with fast TAT and early PPA Estimation

Time: 11.30-12.00 IST by

S. Mallikarjuna Rao & Ashi Goyal, Synopsis Inc, Greater Noida, UP, India

Session Chair: Prof. Rakesh Kumar Pandey

Paper ID	Title	Authors
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Industry Presentation 12.00 – 12.10 IST	The Six Sigma Methodology Implementation in Agile Domain	Abhay Juvekar, Oscar Leo D'souza, Anita Chaware
No ID 12.10-12.20 IST	Universal object-detection under unconstrained environments	Nancy Kaur, Swaroopa K.M, Girija Chetty
No ID 12.20-12.30 IST	IoT and machine learning based landslide susceptibility prediction and mitigation: A case study of Kullu to Rohtang pass transport corridor, India	Nirbhav, Anand Malik, Maheshwar, Nishit
0118 12.30-12.40 IST	Dandelion Algorithm for Optimal Location and Sizing of Battery Energy Storage Systems in Electrical Distribution Networks	Rajesh Patil, Varaprasad Janamala
No ID 12.40-12.50 IST	Towards a generic multi-modal medical data representation model	Swaroopa K.M, Nancy Kaur, Girija Chetty
0130 12.50-13.00 IST	Optimum Sizing of Solar/Wind/Battery Storage in Hybrid Energy System Using Improved Particle Swarm Optimization and Firefly Algorithm	Gauri M. Karve, Mangesh S. Thakare, Geetanjali A Vaidya
LUNCH (13:00 – 14:00 IST) Venue: Lobby at Ground Floor (Block-A)		
Day 1, Parallel Session: Intelligent Systems and its Applications in Societal Life (Date: 24 March 2023 at 14.00-15:30 IST) Venue: Room No. 509 Invited Talk: Multi-modal federated learning heralds a new era of secure and trustworthy computing Time: 14.00-14.30 IST by Prof. Girija Chetty, University of Canberra, Australia Session Chair: Dr. Charu Agarwal		
Paper ID	Title	Authors
0002 14.30-14.40 IST	A Research Agenda Towards Culturally Aware Information Systems	Abhisek Sharma, Sarika Jain and Naveen Kumar Jain
0003 14.40-14.50 IST	Convolutional Neural Network based Quality of Fruit Detection System using Texture and Shape Analysis	Om Mishra, Deepak Parashar, Sudhanshu S Gonge, Kanhaiya Sharma, Amit Kukker
0026 14.50-15.00 IST	AI Replication of Human Intelligence and Implications on Social Life (Online)	Mohammed Ashikur Rahman, Mohammad Rabiul Islam and Atikul Islam Liton
0028 15.00-15.10 IST	Machine learning methodology for the recognition of unsolicited mail communications	Surya Kant Pal, Omar Junior Raffik , Rita Roy and Prem Shankar Jha

0036 15.10-15.20 IST	Estimation of reliability in multicomponent stress-strength model for generalized half-logistic distribution	Taruna Kumari and Anupam Pathak
0055 15.20-15.30 IST	Opinion Mining on Ukraine-Russian War Using VADER	Dagani Anudeepthi, Gayathri Vutla, Vallam Reddy, Bhargavi Reddy and T Santhi Sri
0065 15.30-15.40 IST	Fresh and Rotten Fruit Detection Using Deep CNN and MobileNetV2	Abhilasha Singh, Ritu Gupta and Arun Kumar

High Tea (15:30 – 16:00 IST)

Day 1, Parallel Session: Intelligent Systems and its Applications in Societal Life

(Date: 24 March 2023 at 14.00-15:30 IST)

Venue: Room No. 307

Invited Talk (Online): Gloom Amidst the IoT Bloom: Evaluating Security and Privacy Risks

Time: 14.00-14.30 IST by

Dr. Rajiv Ranjan Singh, Glasgow Caledonian University, UK

Session Chair: Dr. Kapil

Paper ID	Title	Authors
0051 14.30-14.40 IST	Review Paper on Multi-objective Optimization Technique Based on Genetic Algorithm and Its Application	Rakesh, Pravin Kant Pandey, Maneesha
0088 14.40-14.50 IST	An Energy Saving approach for routing in Wireless Sensor Networks with ML based faulty node detection	Nibedita Priyadarsini Mohapatra, Dr. Manjushree Nayak
0092 14.50-15.00 IST	BioBERT Based Model for Covid Related Named Entity Recognition	Govind Soni, Shikha Verma, Aditi Saran, Owais Ahmed
0103 15.00-15.10 IST	A Hybrid Approach for Spontaneous Emotion Recognition in a 2D Valence, Arousal Space	Gyanendra Kumar Verma
0107 15.10-15.20 IST	Impact of Spatial Distribution of Repeated Samples on the Geometry of Hyper planes	Reema Lalit, Kapil
0158 15.20-15.30 IST	Plant Leaf Disease Detection and Classification: A survey	Rajiv Bansal, Rajesh Kumar Aggarwal, Neha Goyal
0159 15.30-15.40 IST	Performance Evaluation of K-SVCR in Multi-Class Scenario	Vivek Prakash Srivastava, Kapil, Neha Goyal

High Tea (15:30 – 16:00 IST)

Day 1, Parallel Session: Signal Processing and Bio-Medical Informatics

(Date: 24 March 2023 at 16:00-17:30 IST)

Venue: Room No. 509

Invited Talk: IPS Cells Technology-Moving from Lab to Clinical Applications

Time: 16.00-16.30 IST by

Dr. Rajneesh Verma, Sure Cell Clinic, Pattaya, Thailand

Session Chair: Prof. Naveen Kumar

Paper ID	Title	Authors
0017 16.30-16.40 IST	Removing Stego-malware from Digital Image Files	Vinita Verma, S K Muttoo, V B Singh, Meera Sharma
0034 16.40-16.50 IST	GCD Thresholding Function applied on an image with Global Thresholding	Hussain Kaide Johar Manasi and Jyoti Bharti
0035 16.50-17.00 IST	Image Semantic Segmentation: Scene Aware System for Autonomous Vehicle	Neha Tomar, Vivek Wanve, Mihir Mendse, Rupal Paliwal, Gauri Morankar
0038 17.00-17.10 IST	Predicting the Pneumonia Disease Using Deep Learning Techniques	Somya Goyal, Rishikesh Bhupendra Trivedi, Anuj Sahani
0041 17.10-17.20 IST	A Novel method for sequence generation for video captioning by estimating the objects motion in temporal domain	Prashant Kaushik and Vikas Saxena
0046 17.20-17.30 IST	Detection of Alzheimer Disease using MRI Images and Deep Networks - A Review	Narottam Singh, Patteshwari.D, Neha Soni and Amita Kapoor
0187 17.30-17.40 IST	Brain Cancer Detection Using Deep Learning	Shivam Pandey, Shivani Bansal

Day 1, Parallel Session: Advances in E-Governance and its Implementation

(Date: 24 March 2023 at 16:00-17:30 IST)

Venue: Room No. 307

Invited Talk: Business Transformations through Digital Technologies

Time: 16.00-16.30 IST by

Mr. Kalyanjit Hatibaruah, M.D. and CEO, Flugelsoft

Session Chair: Dr. Rakesh Kumar

Paper ID	Title	Authors
Industry Presentation 16.30-16.40 IST	IoT Sensor Data Analytics (Online)	Ajit Kumar, Morgan Stanley, New Jersey, USA

0102 16.40-16.50 IST	Model Explainability for Masked Face Recognition	Sonam and Khushwant Sehra
0116 16.50-17.00 IST	Using AWS Services and ELK for Software Reliability Engineering Work (Slides)	Surekha Mane, Bashir Ahamad F Momin
0131 17.00-17.10 IST	Fuzzy Based MPPT control of Multiport Boost Converter for Solar Based Electric Vehicle	Vishnukant Gore, Prabhakar Holambe
0134 17.10-17.20 IST	Role of Natural Language Processing for Text Mining of Education Policy in Rajasthan	<u>Pooja Jain</u>
0175 17.20-17.30 IST	Cryptographic Algorithms in Secure Communication: A Theoretical Analysis	T Devi Manjari, V Pavan Surya Prakash, B Goutam Kumar, T Veerendra Kumar, Khoirom Motilal Singh, Barenya Bikash Hazarika
<i>Conference Dinner (19:30 – 22:30 IST)</i> <i>Venue: Lobby at Ground Floor (Block-A)</i>		
<i>Day 2, Parallel Session: Signal Processing and Bio-Medical Informatics</i> <i>(Date: 25 March 2023 at 09:30-11:00 IST)</i> <i>Venue: Room No. 509</i> <i>Invited Talk (Online): RNA Based therapies in the era of Artificial Intelligence and Machine Learning</i> <i>Time: 09.30-10.00 IST by</i> <i>Dr. Sanjay Pandey, Founder & CSO, Triangulum Biopharma, San Diego, US</i> <i>Session Chair: Prof. V B Singh</i>		
Paper ID	Title	Authors
0150 10.00-10.10 IST	Coordinated Network of Sensors over 5G for High-Resolution Protection of City Assets during Earthquakes (Online)	Ivelina Daiss, José R. Martí, Amitabh Chhabra, Dragan Andjelic, Carlos E. Ventura and Andrea T.J. Martí
0047 10.10-10.20 IST	Skin disease classification and detection by deep learning and machine learning approaches	Summi Goindi, Khushal Thakus and Divneet Singh Kapoor
0062 10.20-10.30 IST	Gait Recognition using Activities of Daily Livings and Ensemble Learning Models	Sakshi Singh, Nurul Amin Choudhury and Badal Soni
0096 10.30-10.40 IST	Optimized Image Watermarking Scheme using DWT-SVD and Ant Colony Algorithm	Megha Bansal, Anurag Mishra and Arpita Sharma

0133 10.40-10.50 IST	Image Classification Model Based on Machine Learning Using GAN and CNN Algorithm	CH. Bhavya Sri, Sudeshna Sani, K. Naga Bavana and Syed Hasma
0142 10.50-11.00 IST	Multi-Modality Brain Tumor Segmentation of MRI Images using ResUnet with Attention Mechanism	Aditya Verma, Mohit Zanwar, Anshul Kulkarni, Amit Joshi and Suraj Sawant
0152 11.00-11.10 IST	Detection of Various diseases and Problems using Medical Image Processing	B.Rekha Sri Durga , I.Akhil , A.Bhavya Sri, R.Lathish, Sanasam Inunganbi and Barenya Bikash Hazarika

High Tea (11.00-11.30 IST)

Day 2, Parallel Session: Intelligent Systems and its Applications in Societal Life

(Date: 25 March 2023 at 09.30-11:00 IST)

Venue: Room No. 307

Invited Talk: Data Analytics in Digital Healthcare

Time: 09.30-10.00 IST by

Ms. Poonam Gupta Krishnan, MD, Iyka Enterprises, Chicago, USA

Session Chair: Prof. Avdhesh Gupta

Paper ID	Title	Authors
0073 10.00-10.10 IST	An Intelligent Covid Management System for Pre Schools	Vibha Gaur, Amartya Sinha, Ravneet Kaur
0074 10.10-10.20 IST	An Insight to Features Selection using ACO Algorithm	Priyanka, Anoop Kumar
0077 10.20-10.30 IST	Analysis and Prediction of Sea Ice Extent using Statistical and Deep Learning Approach	Ramakrishna Pinninti, Nirmallya Dey, Abdul Alim SK, Pankaj Pratap Singh
0087 10.30-10.40 IST	Mobile Application for Leaf Disease Classification	Surendiran Balasubramanian, Vallidevi Krishnamurthy, Sakthivel V, Aditi Ramprasad
0090 10.40-10.50 IST	Risk Prediction in Life Insurance Industry using Machine Learning Techniques - A Review	Prasanta Baruah, Pankaj Pratap Singh
0095 10.50-11.00 IST	Detecting Object Defects for Quality Assurance in Manufacturing	Mohit Varshney, Mamta Yadav, Kartikey Chaudhary,

		Mamta Bisht, Sandhya Avasthi
0160 11.00-11.10 IST	An Ensemble Method for categorizing Cardiovascular Disease	Md. Mohsin, Sufiyan Adam, Neetu Agrawal, Suyash Kumar, Anjana Gosain
<i>High Tea (11.00-11.30 IST)</i>		
<i>Day 2, Session: Development of Cyber Physical Systems in India and the World</i> (Date: 25 March 2023 at 11:30-13.00 IST) Venue: Room No. 509 <i>Invited Talk (Online): AI, Blockchain, Metaverse in Healthcare – Current Development and Prospect</i> Time: 11.30-12.00 IST by <i>Dr. Jayanta Sarma, Lead Consultant Microbiologist at Mid-Yorkshire Hospitals NHS Trust 8, United Kingdom</i> Session Chair: Prof. Vikas Saxena		
Paper ID	Title	Authors
0008 12.00-12.10 IST	<i>A New Solution in Cyber Security for Big Data Using Machine Learning Approach (Online)</i>	Romil Rawat, Olukayode A. OKI, Ademola Olusola ADESINA, Opeyemi AYENI, Sunday Adeola AJAGBE
0020 12.10-12.20 IST	<i>Cyber security in the supply chain and logistics industry: A concept-centric review (Online)</i>	Sunday Adeola Ajagbe, Joseph Bamidele AWOTUNDE, Tarek GABER, Matthew O. ADIGUN
0050 12.20-12.30 IST	Symmetric Secret Key based Quantum Key and its distribution over the networks	Avdesh Gupta, Vishan Gupta, Dinesh Kumar, Vimal Kumar
0063 12.30-12.40 IST	A Conceptual Prototype for Transparent and Traceable Supply Chain using Block chain	Pancham Singh, Mrignainy Kansal, Shatakshi Singh, Shivam Gupta, Shreya Maheshwari, Sonam Gupta
0071 12.40-12.50 IST	Evaluation of An Enhanced Secure Quantum Communication Approach	Neha Sharma, Vikas Saxena
0117 12.50-13.00 IST	Biometric Iris Recognition System's Software & Hardware Implementation Using LabVIEW tool	Rajesh Maharudra Patil, Nagaraja B.G, M.R. Prasad,

		T.C.Manjunath, Ravi Rayappa
0155 13.00-13.10 IST	Text encryption using ECC and chaotic Map	P NVLS Sneha Sree, Vani Venkata Durga Kadavala, Pothakam Chandu, Savara Murali Krishna, Khoirom Motilal Singh, Sanasam Inunganbi
<i>LUNCH (13:00 – 14:00 IST)</i> <i>Venue: Lobby at Ground Floor (Block-A)</i>		
<i>Day 2, Parallel Session: Advances in E-Governance and its Implementation</i> <i>(Date: 25 March 2023 at 11:30 – 13:00 IST)</i> <i>Venue: Room No. 307</i> <i>Invited Talk: Digital Governance by Default</i> <i>Time: 11.30-12.00 IST by</i> <i>Mr. Vikram Garg, Ex. IT Advisor to World Bank, New Delhi, India</i> <i>Session Chair: Dr. Rakesh Kumar</i>		
Paper ID	Title	Authors
0018 12.00-12.10 IST	Entropic Analysis of Reservation Policy of Government of India	Rakesh Kumar Pandey, Maneesha Pandey
0021 12.10-12.20 IST	Design of service hub and analysis of modern causes of unemployment	Lakshay Gupta, Shikha, Amita Goel, Nidhi Sengar, Vasudha Behl
0039 12.20-12.30 IST	Digital identity and target social welfare distribution amid Covid-19 disruption	Rakesh Kumar, Harjit Singh
0044 12.30-12.40 IST	A Multi-Objective Path –Planning based on Firefly Algorithm for Mobile Robots	Prachi Bhanaria, Maneesha, Pravin Kant Pandey
0078 12.40-12.50 IST	Advancements in e-Governance Initiatives: Digitalising Healthcare in India	Sudakshina Das, Vrinda Garg, Jerush John Joseph
0106 12.50-13.00 IST	Comparative Study of Meta-heuristic Algorithms for Scheduling in Cloud Computing based on QoS Parameters	Jyoti Chauhan, Taj Alam
0185 13.00-13.10 IST	Reconstructing Masked Face using GAN Technique	Chandni Agarwal, Charul Bhatnagar, Anurag Mishra
<i>LUNCH (13:00 – 14:00 IST)</i> <i>Venue: Lobby at Ground Floor (Block-A)</i>		

Day 2, Session: Issues in Innovations and Technology Transfer

(Date: 25 March 2023 at 14:00 – 15:30 IST)

Venue: Room No. 509

Invited Talk (Online): Designing IP Solutions for Knowledge Empowerment

Time: 14.00-14.30 IST by

Prof. Unnat Pandit, Comptroller General of Patents, Designs and Trade Marks

Session Chair: Prof. T V Vijay Kumar

Paper ID	Title	Authors
0033 14.30-14.40 IST	IoT-Based Automated Hydroponic Cultivation System: A Step towards Smart Agriculture for Sustainable Environment	Snehal V Ladda
0053 14.40-14.50 IST	Battery Thermal Management System Using Different Coolant for Increasing the Performance of the Battery	Prakirty Kumari, Manikant Paswan
0114 14.50-15.00 IST	Role of Node Centrality for Information Dissemination in Delhi Metro Network	Kirti Jain, Harsh Bamotra, Sakshi Garg, Sharanjit Kaur, Gunjan Rani
0135 15.00-15.10 IST	Multilingual and Cross lingual Audio Emotion analysis using RNN	Sudipta Bhattacharya, Brojo Kishor Mishra, Samarjeet Borah
0136 15.10-15.20 IST	A Detailed Survey on Recognizing Women with Depression using Machine Learning Methods	Vidya Y, Shankar Ramamoorthy, S Pravinth Raja
0188 15.20-15.30 IST	Traffic Accident Modeling and Prediction Algorithm using Convolutional Recurrent Neural Networks	Anil Kumar, Siv Kumar Verma, Subhanshu Goyal
Industry Presentation 15.30-15.40 IST	Analytics over Multimedia using Machine Learning and Computer Vision Concepts – “A case study for Smart Governance”	Saurabh Gupta, Piyushank Gupta, Anup Kumar

High Tea (15.30-16.00 IST)

Day 2, Parallel Session: Intelligent Systems and its Applications in Societal Life

(Date: 25 March 2023 at 14:00 – 15:30 IST)

Venue: Room No. 307

Invited Talk: Multimodal Learning and Contextual Commonsense Reasoning for Conversational AI

Time: 14.00-14.30 IST by

Dr. Soujanya Poria, Singapore University of Technology & Design

Session Chair: Dr. Rajiv Bajpai

Paper ID	Title	Authors
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0109 14.30-14.40 IST	Prediction and Analysis of Liver Disease using Extreme Learning Machine	Charu Agarwal, Geetika Singh, Anurag Mishra
0169 14.40-14.50 IST	Veracity Assessment of Big Data	Vikash, T V Vijay Kumar
0171 14.50-15.00 IST	An automatic decision support system for assessing SDG contributions	Monica Uttarwar, Girija Chetty
0173 15.00-15.10 IST	Real Estate Appraisal Based on Deep Reinforcement Learning	Yun Zhao, Girija Chetty, Dat Tran
No ID 15.10-15.20 IST	Internet of Things based 3-Lead ECG Signal Acquisition System	Pranamy Sinha, Anuja Arora, Sunil Kumar, Daya Bhardwaj, Ravi Kumar
0199 15.20-15.30 IST	A Light weight CNN for Breast Cancer Detection using Knowledge Distillation	Falmata Modu, Rajesh Prasad
0203 15.30-15.40 IST	Cyberbullying Severe Classification Using Deep Learning Approach	Idi Mohammed, Rajesh Prasad
<i>High Tea (15.30-16.00 IST)</i>		
<i>Day 2: Valedictory Session (Date: 25 March 2023 at 16:00 – 17:30 IST) Venue: Room Number 509</i>		
<i>Chief Guest: Prof. N. K. Goyal, Chairman Emeritus TEMA & President CMAI</i>		
<i>Guest of Honor: Prof. Balram Pani, Dean of Colleges, University of Delhi</i>		
<i>Guest of Honor: Prof. Girija Chetty, University of Canberra, Australia</i>		
<i>Presided By: Prof. Shriprakash Singh, South Campus, University of Delhi</i>		