Final Technical Program

(Updated December 08, 2023)

23rd International Conference on
Intelligent Systems Design and Applications (ISDA'23)

23rd International Conference on
Hybrid Intelligent Systems (HIS'23)

19th International Conference on
Information Assurance and Security (IAS'23)

15th International Conference on
Soft Computing and Pattern Recognition (SoCPaR'23)

15th World Congress on
Nature and Biologically Inspired Computing (NaBIC'23)

14th International Conference on
Innovations in Bio-Inspired Computing and Applications (IBICA'23)

13th World Congress on
Information and Communication Technologies (WICT'23)

Organized by

BENNETT UNIVERSITY
THE TIMES GROUP

Machine Intelligence Research Labs
Ancora Impara
2008

5 Venues and Online

***Olten**, Switzerland; **Porto**, Portugal; **Kaunas**, Lithuania; **Delhi**, India and **Kochi**, India*

December 11-15, 2023

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December 11, 2023

08:45 GMT - 09:00 GMT: Conference Opening Ceremony

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Title: How Ants Can Solve Engineering Problems

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Title: Advance Machine Learning to Improve Predictive Maintenance

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Venue: Olten, Switzerland

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Title: Blockchain and DLT: Where Does It Stand

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407 Shukla, Rishi Prakash; Kumar, Divya
Bridging the Mind-Machine Gap: Harnessing AI and ML for EEG Signal Processing and Brainwave Decoding

408 Fernandes, Lucas S.; da Silva Lima, Francisco Igor; Ferreira da Costa, Leonardo; Andrade, Joao P B; Rodrigues Maia, José Gilvan; Leal Rego, Paulo Antonio
BRIDP: Dataset and Validation Method for BRazilian Identity Document Parsing

409 Shukla, Rishi Prakash; Khokhar, Julee; Kohli, Sahil; Kohli, Rajnish
Leveraging Artificial Intelligence for Enhanced Operational Efficiency: A Study on Speed Reduction's Impact on Merchant Vessel Performance

410 Shukla, Rishi Prakash; Kumar, Divya
Neuromorphic Computing and AI-Enhanced Modeling of Time Series Counts for Real-Life Data Analysis

413 Sindhwani, Nidhi
Analysis of Indian News Headlines using Text Clustering

414 Sindhwani, Nidhi
Unlocking the Potential of Big Data Analytics in Supply Chain Management

417 Sindhwani, Nidhi
Crop Recommendation System

ISDA – HIS 2023: Parallel Session 9 (Online)

December 12, 2023
09:00 GMT - 13:00 GMT
Chairs: Tzung-Pei Hong, U. Snekhalatha, T. Preethiya

ISDA 2023

316 Let G, Shine; G, Yaswanthi; S, Rekha; Pratap, C Benin; Radha, S
A Uniplanar Asymmetric Circular Slotted Patch Antenna for 5.8 GHz Applications

HIS 2023

21 Mahjoub, Chahira; Chaibi, Sahbi; Benfradj Guiloufi, Awatef; Ejbali, Ridha; Kachouri, Abdennaceur
Sparse Stacked Autoencoders for Epileptic Seizure Prediction using ECG Signals

23 Ehtesham, Syed; Bedi, Harpreet Singh; Bhardwaj, Ravindra G
Performance Evaluation of ChatGPT on BITSAT – Engineering Entrance Examination

26 da Silva, Thayanne F; Maia, José Everardo B
Detecting Evidence of Organization in Groups of Living Beings Based on Trajectories

27 Kumar, Mohit; Saroya, Vinay; Gola, Kamal Kumar; Kumar, Sumit
A Review on Weather Prediction Based on Deep Learning Model

33 Trung, Ha Duyen; Nguyen Xuan, Dung
LSTM and ARIMA Comparison for Predicting Monitored Data from IoT Networks

36 Yahia, Samah; Ben Salem, Yassine; Abdelkrim, Mohamed Naceur
Lesion Detection in Multiple Sclerosis using the Decimal Descriptor Pattern

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HIS 2023: Parallel Session 10 (Online)

December 12, 2023
13:00 GMT - 15:00 GMT
Chairs: João Carlos Ferreira, Pranaba Kumar Mishro, Anita Sardana

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39 singh, Jaspreet; Ghai, Karuna; Sharma, Dhruv; Singla, Radhika
Blockchain & Federated Learning Technologies for Protecting Sensitive Personal Healthcare Information

40 Rana, Bishwamitra
Hybrid EEG Data analysis for Diagnosis of Stress-related Neurological disorder: SKY as an alternative Therapy

42 Cordero-Martínez, Rodrigo; Sanchez, Daniela; Castillo, Oscar; Melin, Patricia
Estimation of Filter Number for Convolutional Neural Networks with Fuzzy Logic for Diabetic Retinopathy Classification

47 Damasceno, André; de Souza, Luciano A; Neto, Floriano; Gomes Costa, Helder G.
Adapting Project Management Offices to the Era of Hybrid Work, Agile Methodologies, and Industry 4.0

51 Divecha, Charmi K; Panjwani, Sanskriti; Kothari, Yashvi; Jadhav, Utkarsh; Jain, Kavita
AI News Summarization, Headline Generation, and Classification

54 Singh, Shikha; Badotra, Sumit; Shelke, Nitin A
IoMT based Smart Healthcare System using Machine Learning.

56 Gawande, Rupali; Badotra, Sumit; Verma, Amit
Eye Blink Detection using Enhanced Viola Jones Algorithm

57 Elkhalil, Najet; Ejbali, Ridha
IoT communication encryption based on two dimensional Beta chaotic map

60 Omri, Asma
A Possibilistic Approach: Syntactic Indexing Of Big Data In The Presence Of Uncertainty

64 Ganguli, Isha; Paul, Ananya
Promoting Brand Loyalty Using Content Marketing: A Comprehensive Study of Creating a Brand's Identity via Storytelling

66 Ganguli, Isha; Atreja, Satyam; Bhasin, Sanya
Performance Analysis of ChatGPT in Erroneous Python Code Correction and Evaluation

68 Mohapatra, Srikanta K; Babu, Md. Ashraful; Mohanty, Jayashree; Guharoy, Rabel; Sahu, Premananda; Sarangi, Prakash Kumar
Applications of Block chain: Usefulness, issues, & Challenges

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HIS 2023: Parallel Session 11 (Online)

December 12, 2023
13:00 GMT - 15:00 GMT
Chairs: Fátima Rodrigues, Laxman P Thakre, Tapas Badal

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70 Ribeiro, Tiago B.; Pereira, Ana I.
2D Packing in Woodwork Industry

73 Sai Chatadi, Shanmukha srinivas; Paturu, Tejus; Surendiran, B.; J, Dhakshayani
Potato Disease Classification Using Diverse Feature Extraction Methods and Machine Learning Models

75 Varaliya, Mohammed Ashraf; Kanojia, Mahendra G; Nabajja, Subhashish
Revolutionizing higher education institute query system by linking custom knowledge base with large language models

78 Guelib, Bouchra; bounab, rayene; khlifa, nawres
Enhancing Alzheimer's Disease Classification with Embedded RidgeClassifier MRI Regions of Interest Selection

87 Saravanan, Krithikha Sanju; B.L., Velammal
An Agricultural Domain based Question Answering System Using Natural Languag processing and Deep Learning Methodologies

96 B, Nagajayanthi; A, Kaushal Kanna; Kommuri, Usha Kiran; R, Ramesh; T, Vigneswaran
Secured Strategic Workspace Ambience during Global Pandemic Crisis

98 Bechinia, Hadjer; Benmerzoug, Djamel; Khalifa, Nawres
A Bilinear Convolutional Neural Network for Arrhythmia Classification on ECG signals

101 Rahman, Atta; Saraireh, Linah; Youldash, Mustafa; Hantom, Wafa; Alkhulaifi, Dania; Nabil, Majed; Saadeldeen, Ashraf; Mahmud, Maqsood; Abdus Salam, Asiya; Ahmed, Mohammed Salih; Gollapalli, Mohammed
Email Spam Classification: A Machine Learning Approach

106 RG, Sangeetha; C, Hemanth; K T, Ankitha; Tiwari, Anjali
Performance Analysis of OFDMA and MU-MIMO in IEEE 802.11BE Networks

107 RG, Sangeetha; C, Hemanth; V S, Akshaya; S, Amirdha; Vijayaraghavan, Bhargavi
Performance Analysis of Uplink MU-OFDMA and MU-MIMO in IEEE 802.11ax WLANs

110 Mahmud, Imon; Al Islam, Ferdib; Islam, Md. Rahatul; Israk, Md Araf; Ur Rahman, Md Shoaib; Ahuja, Sakshi
IoT-based Smart Poultry and Hatchery Farm: An Integrated Solution with Anti-Theft and Fire Alarm System

115 C, Hemanth; RG, Sangeetha; Dutta, Amit
Mitigation of Four-wave-mixing effects using SSP compensation in Radio Over Fiber System

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HIS 2023: Parallel Session 12 (Online)

December 12, 2023
13:00 GMT - 15:00 GMT
Chairs: Nuno Bettencourt, Manisha Divate, K. Harisudha

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117 Sai Srushik, Govindgari; Naseeba, Beebi; Challa, Nagendra Panini; annepu, Visalakshi; Gouri, Chandana
Pneumonia Disease Prediction UsingVGG19 Architecture

119 R, Ramesh; P, Vijay; M, Shravan; B, sneha; SL, Abdul Haleem
Performance Analysıs of Beamformıng Technique in Multi-RIS for 6G based Vehicular Communication

121 C, Hemanth; RG, Sangeetha; Ashok, Ashwin; Hari, Siva; Vikram, Charan; P, Kishore; Kannan, Aieswarya
Bio-Mimetic Emulation of Swarm Robots

122 RG, Sangeetha; C, Hemanth; Lakshmi, Vidya; R, Meghana; Sivakumar, Sreemathi
Hardware Implementation of Digital Modulation Schemes for Fiber Optic Communication System and its Performance Analysis

125 RG, Sangeetha; C, Hemanth; Udayasuryan, Kavin; Shine, Diya; S, Bhumika
Simulation and Analysis of Downlink Multi-user Modes and Channel Bonding in IEEE 802.11ax

130 Shah, Jay K; Deepak, Gerard
HSIB: Hybrid Semantic Intelligence Model for Book Recommendation

133 Batita, Safa; Makni, Achraf; Amous, Ikram
Towards an efficient and intelligent Graph model-based Cooperative Intersection Collision Avoidance Systems

134 Deepak, Gerard; Mandappa T S, Amruth
ABRHI: An Approach for Blog Recommendation Integrating Dual Classification and Hybrid Intelligence

135 Neji, Ines; Ben Aoun, Najib; Boujnah, Nourddine; Hamza, Hammadi; Ejbali, Ridha
Date Varieties Identification Using DenseNet Model with GAN-Based Data Augmentation

136 Santana Dezingrini, Paulo Henrique; Claudio Arroyo, Jose Elias; Araujo, Matheus F
A GRASP Heuristic for The Open Sub-Route Traveling Salesman Problem

141 Araujo, Matheus F; Nogueira, Thiago Henrique; Claudio Arroyo, Jose Elias; Alves, Julio César
A Reinforcement Learning Method for Integrated Production Scheduling and Distribution

145 Kumar, Mohit; Singh, Khundrakpam Johnson; Gola, Kamal Kumar; Saroya, Vinay
Human Activity Recognition based on Hybrid Deep Learning Model

December 13, 2023

09:00 GMT -10:00 GMT
Plenary Session 8 (Kaunas, Lithuania): *Dalia Kriksciuniene, Vilnius University / Kaunas University of Applied Sciences, Lithuania*
Title: TBA

10:00 GMT -11:00 GMT
Plenary Session 9 (Online): *Ke Feng, Singapore-ETH Centre, The National University of Singapore, Singapore*
Title: Digital Twin-Driven Health Management and Remaining Useful Life Prediction of the Gearbox Transmission System

11:00 GMT -12:00 GMT
Plenary Session 10 (online): *Kusum Deep, Indian Institute of Technology Roorkee, India*
Title: Use of Nature Inspired Optimization Techniques to Solve Real Life Problems

Venue: Delhi, India (Bennett University, Greater Noida)

Technical Session 3: December 13, 2023 05:00 GMT – 09:00 GMT

ISDA 2023

39 Dixit, Prakhar; Roy, Bhola Nath; Rout, Dillip
Deep Learning Approach for Flood Mapping Using Satellite Images Dataset

259 Verma, Satya Bhushan; Gupta, Bineet Kumar; Pandey, Brijesh
Uses of Blockchain in Internet of Medical Things: A Systematic Review

384 Miriyala, Sai Dheeraj; Daram, Anand Steven Chris; Halavar, Bheemappa H
Analysis of Parallel K-Limit Selection Sort Based K Nearest Neighbors for Image Classification

394 Munnee, Ramraj; Armoogum, Vinaye; Armoogum, Sandhya
Analysis of Deepfake Attacks and Detection Techniques in Smart City Applications

445 Nguyen, Tu; Nguyen, Dieu; Pham, Phu; Nguyen, Loan
Enhancing machine learning approaches for early detection of depression levels for Vietnamese students

458 Yana Gaur, Abhay Chaudhary, Ajith Abraham
Analysing Polycystic Ovary Syndrome Using Machine Learning Models

NaBIC 2023

23 Saravanan, T
Approximated ensemble learning driven boosting method for breast cancer prediction on multi-modal clinical datasets

24 Saravanan, T
Enhancing Concealment in 3D Mesh Models using Chaotic based Steganography Algorithm with Minimal Perceptual Distortion

IBICA 2023

77 Yajnaseni Dash, Ajith Abraham, Manish Raj
Reshaping Security: Adversarial Defense in Machine Learning Application

78 Yajnaseni Dash, Prateek Yadav, Ajith Abraham
Service Migration in Edge Computing: Techniques, Challenges, and Future Directions

79 Jeevika Rajput, Yajnaseni Dash, Ajith Abraham
Analyzing Rainfall Patterns in North Indian States: A Long Short-Term Memory (LSTM) Approach

82 Manav Gupta, Vaibhav Pushpad, Yajnaseni Dash, Ajith Abraham
Skin-Deep AI: Convolutional Neural Networks for Predicting Dermatological Conditions

83 Vijay Bhargav Bhamidi, Yash Kanani, Yajnaseni Dash, Ajith Abraham
HealthTech Horizons: Promoting Sustainable Healthcare in Developing Nations

85 Megha Dhaka, Jeevika Rajput, Yajnaseni Dash, Ajith Abraham
A Deep Dive into Southern India's Rainfall: LSTM Perspectives

86 Abhay Chaudhary, Yana Gaur and Ajith Abraham
Improving Healthcare Decision Support Systems

HIS - IAS 2023: Parallel Session 13 (Online)

December 13, 2023
09:00 GMT - 13:00 GMT
Chairs: João Carlos Ferreira, Deepti Chaudhary, BK Gupta

HIS 2023

113 Muduli, Debendra; Rahul, K; Durga, Kondepudi Venkata; Naidu, Amballa Vijay Sai Charan; Kumar, Majji Jayanth; Sharma, Santosh Kumar
Enhancing Glaucoma Detection: A Customized CNN Model Combining InceptionV3 and VGG-16 for Fundus Image Classification

118 Muduli, Debendra, Zargar, Ahmad Ashraf, Rath, Adyasha, Priyadarshini, Rojalina, Nanda, Surendra, Panda, Ganpati
Advanced Fusion of Deep Learning and SVM for Robust Monkeypox Disease Detection: A Promising Hybrid Model

146 Mali, Yogesh K; Rathod, Vijay U; Mali, Nilesh D; Mahajan, Harshal C; Nandgave, Sunita Santosh; Ingale, Shubhangie
Role of Block-chain in Medical Health Applications with the help of Block-chain Sharding

150 Conrado, Luiz Felipe; Huther, Cristina; Silva Machado, Flávio; Calado, Robisom Damasceno; Gomes Costa, Helder G.
Analysing metadata of articles connecting IOT to Agriculture and Climate Change

154 Krishnan A, Aravind; Deepak, Gerard; Vijayan, A. Santhana
IQOK: Intelligent Querying using Ontology Prompting for Ontology-Knowledge Integration

157 Fernandes Costa, Leonardo; de Souza, Luciano A; Costa Roboredo, Marcos; Gomes Costa, Helder G.
A guide for using MRLib: a web-based app for bibliographical data files merging

IAS 2023

1 R, Manoranjitham; Bala Rajesh, Yetukuri; Kovuru, Victoria; E, Yuvaraajan; Bala Srikanth, Nagothu
Analog Clock-Based User Authentication Method for Smartphone Users

2 Devineni, Vaishnavi; Movva, Vaishnavi Ratnam; Medisetty, Gopichand; Tokala, Srilatha; Enduri, Murali Krishna; Satish, Anamalamudi
Evaluating the Efficacy of Machine Learning Algorithms in Heart Disease Prediction

4 Sathvika, Kurmala Lakshmi; Srujitha, Devineni; Tanya, Kavuru; Tokala, Srilatha; Enduri, Murali Krishna; Satish, Anamalamudi
Predicting User Sentiments in Social Media with Machine Learning and Natural Language Processing techniques

5 Sujana, Jessy
Water Contamination Event Detection using Edge Forcing Sets in Nanosheets - A novel approach

6 Chandrabanshi, Vishnu; S, Domnic
Binary Authentication Protocol: A Method for Robust Facial Biometric Security using Visual Speech Recognition

17 Achimugu, Philip
A Modified Gender Classification Approach using Capsule Network

23 Mohamed, Safa; Mahjoub, Chahira; Ejbali, Ridha
An Efficient Network Anomaly Detection Approach Based on Autoencoder

24 Achimugu, Philip
Swarm Optimized Kernel Linear Discriminant Model for Human Facial Recognition

25 Prabhaker, Nilin; Bopche, Ghanshyam S; Gupta, Dvarkesh; Arock, Michael
Generation of Honeytokens for Relational Database using Conditional Tabular Generative Adversarial Network (CTGAN)

29 Scarfò, Antonio; Palmieri, Francesco; Mastroianni, Michele
On Cyber Security Risk of Medical Devices

30 Kolling, Alisson H; Soares Gonçalves, Marcos Vinicius MV; Cukla, Anselmo Rafael; Tello Gamarra, Daniel Fernando; Glass, Gustavo; Silva de Castro, Bruno; Ferreira Pereira, Leonardo; Schmitt, Natã Ismael; Lik Santos, Vitoria; Bevilacqua, Solon; Gomes Silva, Thassio; Pinto Mota, Fernanda
Simulation-Based Approaches for Autonomous Security and Monitoring using Drones

31 Raja, Manjula; Jadon, Parsh; Sharma, Krishna; Sharma, Venkatesh; Abdul, Ashu
Path Loss Prediction Using Machine Learning Models for in-vivo Wireless Nanosensor Networks in Cardiac Health Monitoring

34 ES, Sreekanth; E, Govindraj; Shana, Fathima
A review of Recent Advancements in Hybrid Reversible Watermarking techniques for Medical Image Transmission

39 Agrawal, Anamika; Verma, Satya Bhushan; Gupta, Bineet Kumar
Ransomware Anatomy, Impact, and Mitigation Strategies

44 Khoi, Bui Huy
Bayesian Model Algorithm for Selection and Classification of Product

45 Chinnadurai, Sunil; Kothamasu, Kesava Sriram; Golla, Lekhana; Kilaru, Priyusha
Spectral and Spatial Feature Extraction Techniques for Advanced Hyperspectral Image Classification

46 Chinnadurai, Sunil; Muddana, Venkata Krishna Saadhvik; Vadapalli, Pujitha; Kari, Dimple
Hyperspectral Image Classification with Deep Learning: Unleashed by Feature Selection and Extraction

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IAS – SocPaR 2023: Parallel Session 14 (Online)

December 13, 2023
09:00 GMT - 13:00 GMT
Chairs: L. Agilandeeswari, Gerard Deepak, Rohit Anand

IAS 2023

47 Vivekanandan, Manojkumar
Blockchain and IPFS Based Secure File Storage using Smart Contracts

55 Scarfò, Antonio
Deep Learning Techniques for Botnet Detection

56 Chetouane, Ameni; karoui, Kamel
Sequential Images Classification for Intrusion Scenario Detection in the SDN Environment based on Deep Learning

57 Bratan, Costin A
Emotion recognition in screaming audio files with convolutional neural network (CNN)

58 Eliganti, Ramalakshmi; Puni, Sai Krishna; Embadi, Srikanth; Karagalla, Sai teja; Jyothi, B Veera
Review on Cervical Spine Fracture Detection Using Deep Neural Networks

63 Gulati, Aditi; Gulati, Akriti; Tomar, Aditi; Choudhary, Aanchal; Gola, Kamal Kumar; Das, Puja
Comparative analysis of security algorithms

SoCPaR 2023

48 Agilandeeswari; A, Akshat; Dubey, Dhruv; Mutyalabhuvan, Saieesh
Brain Tumor Detection: A review on Pre-Deep Learning and Deep Learning Era

50 Pardeshi, Aarti S; Kanojia, Mahendra G
Comparative study on computer vision-based pose-estimation models for detecting martial art moves

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SocPaR 2023: Parallel Session 15 (Online)

December 13, 2023
13:00 GMT - 15:00 GMT
Chairs: Virgilijus Sakalauskas, Ritika Wason, Raman Chadha

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60 Behele, Saanvi A; Advani, Pranav D; Pandya, Mann; Atal, Keshav; Gutte, Vitthal Sadashiv
Optimization of Non-Convex Loss Functions in Neural Network Training

63 Kumar H S, Manoj; Deepak, Gerard; Vijayan, A. Santhana
VQARS: Visual Question Answering for Remote Sensing as a Domain of Choice incorporating Semantic Intelligence

67 Leon, Marcelo; Echeverria, Fabricio; Huacon, Veronica; Sares, Darlys
Machine Learning using Auto Regressive Vectors to predict Ecuador's percentage growth

68 Jayanth, MKV; Deepak, Gerard; Vijayan, A. Santhana
WPIML: Web Page Indexing using Heterogeneous Multi-Source Knowledge and Reasoning by Fact Driven Learning

70 Doddapaneni, Pavitra; Sudhakar, Suba Sree; Kumaran, Vimala
Harmonizing Data Analysis and Model Selection for Superior IT Fraud Detection

71 Kolhar, Shrikrishna; Jagtap, Jayant; Ramesh, Dhaniksha; Lahane, Onkar; Gupta, Aditya; T, Christina; Tripathy, Rushali
AgriEasy: Digitizing Agriculture for Farmer Welfare

74 Kumar, Naveen; Judith, J.E
License Plate Recognition of Motorcycle Riders without Helmet using Deep Learning

76 Kala.M, Kumari; M, Priya.
Block chain-based Smart IoT Sensitive Data Hashing for Healthcare Environment Security

77 Jones, Jasmine Shirley; M, Priya
IoT Intrusion Detection: A Classifier Performance Analysis

78 Anwesh, Ramineni; Morla, Ramya; Vihnesh, Karanam; Uday, CH; Nellutla, Ravinder
Gender Detection Using Machine Learning

82 Guttikonda, Prashanti; Tulasi Krishna, Sajja; Pacha, Supriya; Popuri, Ashok Kumar
Audio Secret Sharing Scheme with Neural Cryptography for Cheating Detection

92 V, Uma Maheswari; Ehdeen Ali, Syed Mohammed
Students Performance Analysis Using Cumulative Predictor -XgBoost Algorithm

SocPaR 2023: Parallel Session 16 (Online)

December 13, 2023
13:00 GMT - 15:00 GMT
Chairs: Dalia Kriksciuniene, Subramaniyaswamy V, Bhawna Goyal

96 R, Shanthakumari
Pneumonia Detection Using Extended Vgg19 Architecture

100 T, shanmugapriya
Effective Heart Disease Prediction Using Machine Learning Algorithm with Cardiovascular Health Monitoring System

112 Elaissaoui, Khadija; Jalal Rabbah, Jalal; Ridouani, Mohammed
Multi-class Brain Tumor Classification Using MR Imaging Data and Deep CNN

133 Sai Prashanth, Mallellu Malellu; V, Uma Maheshwari; Aluvalu, RajaniKanth; Kantipudi, MVV Prasad
Blockchain-based Digital Identity Management System for Cybersecurity

134 Kumar, Raj; J Bose, Roshin; N V, Sobhana
User Behavior Analysis and threat detection using Machine Learning

135 Sai Prashanth, Mallellu Malellu; V, Uma Maheswari; Aluvalu, RajaniKanth; Kantipudi, MVV Prasad
Student Performance Prediction Analysis using Neural Networks

138 R, Devi Priya; L, Tharunika; S, Shreya; T, Rajasekaran; T, shanmugapriya; M, Siva Sangari; R, Sivaraj
Large Language Models based framework for finding Cloth Quality

139 Panda, Pinky Sushant
Sign Language Interpreter using Machine Learning Model for Mobile Devices.

145 Dsouza, Jeshma Nishitha; Ramesh, Niveditha; Polin, Mareena
Detection of scoliosis on spinal X-ray images using Transfer Learning

146 Hebbar, Abhinav; Deepak, Gerard
SOVQA: Semantics Oriented Framework for Visual Question Answering Aggregating Regulated Knowledge and Partial Learning

147 Patel, Vaibhav Anil; Kanojia, Mahendra G; Nair, Vainavi V
An approach to breast cancer detection with histopathological images using transfer learning

SocPaR 2023: Parallel Session 17 (Online)

December 13, 2023
13:00 GMT - 15:00 GMT
Chairs: Anjula Mehto, Mandeep Mittal, L. Godlin Atlas

148 Tank, Dharmesh R; Patel, Sanjay; Pandya, Devang S
The State of the Art in Deep Learning-Based Anomaly Detection for Crowded Videos

149 Deepak, Gerard; Hariharan, Nitin
SSIAO: Strategic Semantic Incremental Approach for Domain Centric Open Linked Data Generation

151 Bykova, Daria; Denisova, Anna; Fedoseev, Victor; Korchikov, Evgeny
Methods for updating forest inventory data through multi-temporal Sentinel-2 image analysis

152 B, Hemalatha; B, Karthik
Implementation of Multilevel Monitoring and Control System for Mission Smart Villages

155 Salmi, Mabrouka; Atif, Dalia; Abraham, Ajith; Ventura Soto, Sebastián
Proposing a Genetic Algorithms-based Data Selection Method for Imbalanced Medical Datasets

159 S, Sathyanarayanan; Murthy, Srikanta; Mallappa, Satishkumar; Gudada, Chandrashekar V
Machine Learning Approach Using HOG and LBP Features of Spectrograms-based Heart Sounds Analysis for the Detection of Heart Diseases

160 Afyouni, Imad; Al Aghbari, Zaher; Sikaiti, Iman
Unveiling GeoX Posts: Advancing Spatial and Temporal Inference from Social Media Narratives

162 Arekar, Vedanti; Vaishampayan, Devashree; Abraham, Ajith
Medicinal Plant Recognition Using Image Processing

December 14, 2023

09:00 GMT -10:00 GMT
Plenary Session 11 (online): *Milan Tuba, Singidunum University, Serbia*
Title: Application of Bio-inspired Optimization Algorithms to Problems in Artificial Intelligence

10:00 GMT -11:00 GMT
Plenary Session 12 (online): *Aboul Ella Hassaneinen, Cairo University, Egypt*
Title: Innovations for Intelligent Systems: Basics, Trends and Open Problems

Venue: Kochi, India

Technical Session 4 - December 14, 2023 05:00 GMT – 09:00 GMT

ISDA 2023

83 Manoharan, S; Ye, Xinfeng
Teaching Service-Oriented Architectures using a Two-Player Online Game

84 M, Aparna; S, Lilly Sheeba
Study on Health Issue Identification Using Deep Learning and Convolutional Neural Networks

91 Soundara Pandian, Asha Pon S; M, Barath; V, Jeyalakshmi
A Graph Partitioning Approach to Optimize Test Patterns

169 Patil, Anita R.; Jadhav, Poonam; Borkar, Gautam Murlidhar
Analysis of Privacy Preservation on Mobile Ad-Hoc Networks

422 Dhaku, Chavan Rajkumar; S, Durgashree; Arumugam, Senthil Kumar; V R, Uma
Analysing Crypto Trends: Unveiling Ethereum and Bitcoin Price Forecasts through Analytics-Driven Weighted Moving Averages

NaBIC 2023

33 Misra, Rajesh; Ray, Kumar S
Particle Swarm Optimization based on Novelty Search

SoCPaR 2023

90 Movi, Mintu, Jabbar P, Abdul
Unveiling Rare Patterns: A Comparative Study on Anomaly Detection Algorithms in CCTV Footage for Safeguarding Home Premises

111 Shahul, Mehanas K P, Pushpalatha
Patient Classification in Emergency Department Triage using Ensemble Techniques

106 L, Thushara; Jabbar P, Abdul
Yoga Posture Prediction using Invariant Moments and Machine Learning Techniques

WICT 2023

24 Devi, Nisha; Gupta, Shilpa
Transforming Agriculture with AI and Machine Learning: A Review of Agri-Health and Crop Protection in the Agri 5.0 Era

112 Hassan, Hashmy; Elayidom, M.Sudheep
GoKnowGraph: A Multilingual Semantic Search System for Government of Kerala System Documents

IBICA 2023

52 Rominus, Ancy; John, Chinju; Sahoo, Jayakrushna
Sentiment Analysis of Online Product Reviews Using CNN-LSTM Cascaded Deep Learning Architecture

66 Giri, Sourav Kumar; Dash, Sujata
Prediction of Epileptic Seizures based on EEG dataset Using an Enhanced Extreme Learning Algorithms

HIS 2023

89 Dash, Deba P; H.Kolekar, Maheshkumar; Mishra, Eva
Eeg Based Epileptic Seizure Detection using Deep Learning and Machine Learning Model.

NaBIC-IBICA 2023: Parallel Session 18 (Online)

December 14, 2023
09:00 GMT - 13:00 GMT
Chairs: Priyanka Jangra, Lotfi Ben Romdhane, Ramesh Chandra Poonia

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NaBIC 2023

1 Musa, Aminu; Hassan, Mohammed; Hamada, Mohamed; Aaron, Alex; Umar, Usman; Mahendran, Anand
A Hybrid Lightweight Deep Learning Model for Edge Devices: Combining Knowledge Distillation, Pruning, and Quantization

17 Madan, Suman
Metaheuristic Intelligence Approach for Sentimental Analysis

29 Agarwal, Vedant; Budhiraja, Samiksha; Sasi, Ashwin; S P, Jeno Lovesum
Enhanced Approach for Precision Agriculture using AI/ML Techniques

30 J, Jackson; R, Perumal
A Medical Image Encryption Technique using Tropical Semiring

31 A, Ponmaheshkumar; R, Perumal
A robust key exchange scheme for the Internet of Medical Things

34 Sundaramurthy, Vasudevan; V, Govindan
Gold Rate Historical Data Analysis

40 B A, Nagashree; Sampath, Satheesh Kumar S; V, Muthukumaran; Joseph, Rose
Analysis of Viral and Non-Viral Categories of Video Through Social Media Using Machine Learning Techniques

41 Muthukumaran, V; B. A, Nagashree; Sampath, Satheesh Kumar S; Munrathnam, Meram; Angeline Kavitha, M.A
Comparative Analysis of IoT Data Using Machine Learning Algorithms

59 Narayanan, Neethu
Early Detection of Autism Spectrum Disorder through Machine Learning: A Multidisciplinary Approach

61 Muthukumaran, V; Sampath, Satheesh Kumar S; E.K, Radhika; G K, Arpana; R, Nalini
Face identification with feature learning using quasilinear partial differential equation

64 N, Bharanidharan; S R, Sannasi Chakravarthy; V, Vinothkumar; B, Kavya; G, Meghana; Rajaguru, Harikumar
Breast Cancer Diagnosis Using Elephant Herding Optimization and Sparse Autoencoder Through Gene Expression Analysis

65 Balakrishnan, Roshni M; N, Bharanidharan; S R, Sannasi Chakravarthy; V, Vinothkumar; Patil, Swetha; Rajaguru, Harikumar
Oral Squamous Cell Carcinoma Diagnosis Using Spotted Hyena Optimizer Combined with Transfer Learning Approaches

66 K R, Krishnaprasad; Sebastian, Indu; Joseph, Sijo K
Optical Vortex Beam Generation and Interferometric Verification of Parameters

69 Roy, Abhijith; Deepak, Gerard
A Semantically Driven Model for Web Image Tagging Using Diverse Tag Selection

71 Deepak, Gerard; Hariharan, Nitin
DRCS: Document Recommendation Framework for Cultural Studies as a Prospective Domain

73 Surendran, Arya; R, Tintu
Annealing temperature dependent Structural and optical tunabilty in Green synthesized ZnS Quantumdots

IBICA 2023

3 Hariharan, Nitin; Deepak, Gerard
OSPC: Ontology Synthesis on Peace and Conflict Studies as a Domain of Choice

6 Sasaki, Hideyasu
Ant Collective Behavior Inspires Robotics for Finding Proper Size of Swarm Involving Functional Heterogeneity

7 Cherrat, Khaoula; Riffi, Mohammed Essaid
Combinatorial Optimization: Application and Comparison of Metaheuristic on Continuous Optimization Problem TSP

10 Vyas, Annamaya; Deepak, Gerard
InCVQA: Incremental Knowledge Derivation Scheme for Visual Question Answering Using Gated Recurrent Units

IBICA - WICT 2023: Parallel Session 19 (Online)

December 14, 2023
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Chairs: André Serra e Santos, Rabindra Bista, Bassem Bsir

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11 M, Prathibha; Deepak, Gerard
StrategicVideoRec: A Strategic Approach for Scientific Video Recommendation integrating BERT and Fact Driven Semantics

12 Anavkar, Harshada; Deepak, Gerard
OSMA: Ontology Generation and Synthesis for Sports Medicine and Athletics

18 Ganeshna, Bharath Kalyan; G, Maheshwari; Nandanwar, Swapnil; Biswal, Sumitra
ACO Bio-Inspired Artificial Intelligence in Automotive Technology: Bridging Natural Systems and Machine Learning for Sustainable Mobility

29 L, Divya P; B, Soniya; J S, Jayasudha J S
A Comprehensive Review on Integration of Blockchain and IoT

32 Hamodi, Yaser; Abdelkareem, Ammar E.; Fakhrudeen, Ahmed M.
Predicting Public Perceptions of Electric and Hybrid Vehicles with ML Algorithms in Response to Oil Price Changes

34 Karki, Praynita
Enhancing Fault Tolerance Level in E-Health Monitoring System Using Proactive Approach

45 M, Vadivel S; Shetty, Deeksha Sanjay; A, Eswaran; k, loganathan; a, abhinav
Sustainable and green supplier's evaluation using TOPSIS and fuzzy TOPSIS methods

48 Sayed, Amaan; Kanojia, Mahendra G; Nabajja, Subhashish
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51 Dasgupta, Tiasha; Abraham, Ajith
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53 M, Vadivel S; shankaran, meenakshi; C, Devanathan; Sequeira, Aloysius Henry; a, abhinav
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54 M, Vadivel S; Khosla, Sunil; C, Devanathan; Sequeira, Aloysius Henry; A, Abhinav
An ANN Approach for Lean Service Implications in India Post Service For The Enhancement of Operational Performance

61 Kumar, Raj; M C, Aswathy; N V, Sobhana
A Novel Signature based Reconnaissance Attack Detection and Threat Identification System

64 Gupta, Isha; Bajaj, Anu; Sharma, Vikas
Review of Machine Learning Algorithms for Heart Disease Prediction

65 Modi, Akshita; Bajaj, Anu; Sharma, Vikas
Review of Machine Learning Techniques for Epileptic Seizure Prediction

68 Shetty, Deeksha Sanjay; K R, Suprabha
Impact of Contextual Factors on Adaptive Performance: A study on Indian PSBs using ANN analysis

4 Krishnan A, Aravind; Deepak, Gerard; Vijayan, A. Santhana
OFSI: A Strategic Approach for Ontology Focused Storyboarding Integrating Semantics Oriented Reasoning with Finance and Economics as the Domain of Study

5 Vyas, Anamaya; Deepak, Gerard
SportsKBGen: A Framework for Knowledge Base Generation for Sports as a Prospective Domain

6 K, Logeswaran; S, Savitha; P, Suresh; K R, Prasanna Kumar; M, Gunasekar; M, Vasugi; J, Ruthranayaki; C, Harish; T, Akilesh
Pre-Owned Automotive Price Prediction Using Machine Learning Technique

7 Sriramineni, Shreya; Deepak, Gerard
MGLI: Metadata driven Generation and Formalization of Large-Scale Ontologies for Island Studies as a Domain of Choice.

10 Deepak, Gerard; Hariharan, Nitin; Vijayan, A. Santhana
SIIWL: Strategic Integrative Intelligence based models for Web Page Recommendation Encompassing Inferential Hybrid Knowledge Centered Learning

12 Munjal, Meenakshi
User-Oriented Approach for Network Selection in Heterogeneous Environments

13 Morillo, Giovanna
Business Intelligence in the COVID-19 Era

15 Narayan, Yogendra
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18 Munjal, Meenakshi
QoS and QoE-based Network Selection in Heterogenous Wireless Network

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Chairs: Ana Maria Madureira, Prashant Dixit, Pranaba Kumar Mishro

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19 Bishnoi, Neha; Munjal, Meenakshi
A Comparison of Machine Learning Algorithms on Handwritten Digit Recognition

23 Rout, Dillip; Roy, Bhola Nath; bee, Ayesha; Routray, Deepshikha
A Comparative Study of Mapping Names for Automating Attendance of Online Classes using Machine Learning Models

25 Somvanshi, Vinayak; Walavekar, Gandharvi; Thakkar, Kevin; Kumbhar, Yogesh; Deshmukh, Neha; Deshpande, Kiran
Comprehensive Blockchain-Based Cross-Platform Application for Roadside Assistance

27 P, Sundharesalingam; M, Dr Mohanasundari; P, Vidhya Priya; M, Dhilip Kumar
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ISDA 2023: Offline Session 1

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Chairs: Prafulla B. Bafna, Sangeeta Kumari, S Rekha

2 Vineeta; Kumar, Anubhav; S Manek, Asha; Christa, Sharon; Mishra, Pranay Kumar
Identifying Lung Cancer from CT-Scan Images with VGG16 Convolutional Neural Net

19 Nguyen, Dung Ha; Nguyen, Anh Thi-Hoang; Ho Thanh, Duy Khanh; Nguyen, Nguyet Thi; Nguyen, Kiet Van
Automatic Textual Normalization for Hate Speech Detection

20 Gunasheelan, Akshith; Deepak, Gerard
SOTW: Semantics Oriented Tagging of Web Pages

26 Sharma, Swedika
Misdirection Attack in Wireless Sensor Network Using Threshold Method

32 Moholkar, Utkarsh R; Patil, Dipti
Deep Learning Approach for Autonomous Spacecraft Landing

36 Krishnan A, Aravind; Deepak, Gerard; Vijayan, A. Santhana
TESA: Tagging of Educational Videos Using Semantics Oriented Artificial Intelligence

50 Talha, Amira
Blockchain for data traceability in the agricultural sector

52 A, Revathi; Maddirala, Maddirala Venkata Sai Lohith; Karnati, Karnati Dharani Kumar Reddy; Mallisetty, Mallisetty Pavan Kalyan
Isolated Word Recognition based on Power Normalized Cepstrum and Machine Learning Clusters

53 Ben Hassen, Mariam; Zahhaf, Sahbi; Gargouri, Faiez
A Core Domain Ontology for Specifying the Business View of Enterprise Information Systems

56 benmohamed, chams adhouha; KTARI, Jalel; FRIKHA, Tarek
Leveraging Blockchain for Secure Water Meter Reading

58 Bándi, Nándor; Gaskó, Noémi
A Hybrid Differential-Evolution-based Approach to the Sensor Network Localisation Problem

63 Amoo, Oseni T; Bukome, William; Seyam, Muhammed
Modelling Inters Seasonal Variability Impact On Water Demand in A Smart City

64 Concepcion II, Ronnie; Ong, Jonathan Daniel; Mababangloob, Giolo Rei L; Garcia, Lance; Relano, R-Jay
Eco-designed Recirculating Vertical Aquaponic Lettuce Production System through Mamdani Fuzzy Logic-based Adaptive Fertigation

65 Gashnikov, Mikhail
Video Codec Using Machine Learning Image Compression Techniques

68 Poonia, Ramesh Chandra; S, Aarthi; Samanta, Debabrata
An Intelligent Model for Post Covid Hearing Loss

69 Ben Hassen, Mariam
Multi-dimensional Classification of SBP Modeling Aspects

71 Kaushik, Bhavana
Unveiling Deepfakes: Customized Convolutional Neural Networks for Detection

76 Yelleti, Vivek; P.S.V.S, Sai Prasad
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87 Luong, Duong Trong; Tuan, Tran Ngoc; Duc, Nguyen; Hung, Dao
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89 Azman, Muhammad Asyraf; Jantan, Hamidah; Mohd Bahrin, Ummu Fatihah Binti; Abd Kadir, Ermeey
Solar Power Production Forecasting Model Using Random Forest Algorithm

92 Tyagi, Amit Kumar; Tiwari, Shrikant; Kukreja, Swetta
DNA Computing: Challenges and Opportunities for Future

93 Tyagi, Amit Kumar; Singh, Rabindra Kumar; Tiwari, Shrikant
Artificial Intelligence based Chatbots is Killing Creative Minds: An Effective Discussion on Modern Education

94 Hong, Tzung-Pei; Hong, Ching-Shan; Su, Ja-Hwung; Chen, Chun-Hao
Data Augmentation Using Generative Neural Networks Based on Fourier Feature Mapping

96 Oluwadare, S.A.; Alakuro, Mutiu; Sarumi, Oluwafemi A
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102 E M, Roopa Devi
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103 Fang, Jiaqi; Ma, Kun
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105 Tasnádi, Zoltán; Gaskó, Noémi
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106 Dankov, Yavor; Aleksieva-Petrova, Adelina; Petrov, Milen Yordanov
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107 G K, Kamalam; R, Dharunya; J, Harini; T,
Kowres Unlocking The Potential of Novel LSTM In Airline Recommendation Prediction

111 Granillo, Erika; Gonzalez, Rogelio
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114 Resende, Hugo G; Loureiro, Michelli; dos Santos, Edimilson Batista; Loureiro, Felipe
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115 Zhao, Juntao; Hifi, Mhand; Zhang, Yulin; LUO, Xiaochuan
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118 Kondo, Gloria; Umapathy, Snekhalatha; Salvador, Anela
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132 MACHADO, VINICIUS PONTE; Alencar, Marina; Veras, Rodrigo
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136 Capuano, Nicola; Fenza, Giuseppe; Gallo, Mariacristina; Loia, Vincenzo; Stanzione, Claud
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137 Teixeira, Inês; Baptista, José; Pinto, Tiago
Solar Intensity Classification with Imbalanced Data

140 Júnio Calsavara Andrade, Lucas; dos Santos, Edimilson Batista; Figueredo de Barros, Charles
A methodology to evaluate the security of block ciphers against neurocryptanalytic attacks

144 C, Nalini; Y, Agashia Maria; T, Janarthanan; M, Manibharathi
Enhancing positivity on social media: a review of offensive comment classification

145 Pradhan, Jitesh; Kumar Pal, Arup; Islam, SK Hafizul; Samanta, Debabrata
DNA Transcription and Translation Inspired Deep Features for Classification-based CBIR

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December 11, 2023
08:00 GMT - 12:00 GMT
Chairs: L. Agilandeeswari, Abhishek Roy, Farah Jemili

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147 Gabsi, imen; Kammoun, Hager; Mtar, Rawed; Amous, Ikram
Word2Vec-GloVe-BERT embeddings for query expansion

152 Bentounsi, Oussama; Mouatassim Lahmini, Hajar
How can Credit Scoring benefit from Machine Learning? SWOT Analysis

154 Brilhante, Guilherme Freire; Gomes, Adriell; José, Nascimento JDC; Adelino Rodrigues, Yasmim Osório; Jaborandy de M. Dourado Junior, Carlos Mauricio; Souza, Luís Fabrício Freitas
ALPR System Perspective Adjustment: New Automatic License Plate Recognition Approach for Brazilian Mercosur Model Vehicle Plates

159 A P, Ponselvakumar; V P, Girishankar; G, Iniyan; B, Logesh
Improving the cryptocurrency price prediction using deep learning

224 S, Srividhya; V, Brindha; S S, Sudeekshaa
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226 Adelino Rodrigues, Yasmim Osório; José, Nascimento JDC; Junior, Osvaldo S L; Gomes, Adriell; Brilhante, Guilherme Freire; aborandy de Mattos Dourado Junior, Carlos Maurício; Souza, Luís Fabrício Freitas
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232 Nespolo, Renan G; Valejo, Alan; Lopes, Alneu A.
A Study of Transductive Graph-Based Regression

234 Nespolo, Renan G; Valejo, Alan; Lopes, Alneu A.
Geolocalized Transductive Graph-Based Regression Applied to Sustainability Indicators Prediction

235 Ben kraiem, Maha; Feki, Jamel
Data Warehouse design to support Social Media Analysis: The case of Twitter and Facebook

237 Azizi, Ridha; Sakly, Houneida; Bouhlel, Med Salim
Towards Hybrid approach based SVM and Radiomics features for COVID-19 classification and segmentation

238 MILI, Rahma; khaskhoussy, rania; Bouaziz, Bassem; Maalel, Ahmed; Gargouri, Faiez
Classifying Ocular and Muscle Artifacts in EEG Signals

241 Bsir, Bassem; zrigui, mounir
Deep Learning based transformers for Keyword extraction

242 Jlidi, Nozha; Jemai, Olfa; Bouchrika, Tahani
Advanced Video Analytics: MediaPipe, Bounding Boxes, and Graph-Based Tracking for Object Detection

243 Naily, Rehab; yahia, siwar; Zaied, Mourad
A new deep Learning architecture based on Long Short Term Memory and Wavelet Transform for Epileptic EEG signal Classification

244 JRABA, Safa; Elleuch, Mohamed; Ltifi, Hela; Kherallah, Monji
Classification of Alzheimer’s Disease with Transfer Learning using Deep Learning Models

245 Ahlawat, Rakesh; Chander, Abhishek; Dutt, Parmesh; Kumar, Dinesh; Ghai, Mandeep; Garg, Sanjeev Kumar
Machine Learning in Tourism Research: A Bibliometric Analysis Using Dimensions Database

247 Amara, Marwa
Efficiency of Dropout Regularization in Character Recognition: Introducing the Dropout Efficiency Score within Intelligent Systems Architectures

248 Gheni, hadeel qasem; Al-Yaseen, Wathiq Laftah
Enhanced Gaining-Sharing Knowledge Optimization Algorithm for 3D Compression of Intrusion Detection Dataset

250 Souza, Elian; Monteiro, Edwin E; Barreto, Raimundo da Silva; de Freitas, Rosiane
Optimizing Energy Consumption in Android Mobile Devices Based on User Recommendations

253 Baskaran, Ramesh; Sankaranarayanan, Bathrinath; Karuppiah, Koppiahraj
Identification and Analysis of Barriers for In-Service Pressure Vessel and Piping Inspection Using DEMATEL Approach

254 Mourad, Ellouze; Hadrich Belguith, LAmia
A Data Warehouse Model for Analyzing the Behavior and Writing Style of People With Personality Disorders On Social Media

262 R, Thangarajan; K R, Balasurya; V K, Bharath; R, Karthikeyan
A Deep Learning Approach for Prediction of Plant Diseases

December 12, 2023

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December 12, 2023
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Chairs: Mourad Ellouze, P. Suresh, Jessy Sujana G

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265 Malik, Parul; Singh, Jaiteg
Micro Expression Recognition - Contemporary Challenges, Options and Analysis

274 Mallek, Hana; Ghozzi, Faiza; Gargouri, Faiez
Real-Time ETL for multimedia sources: A Systematic Literature Review

279 K, Dhanush; A, Jeevanantham
Wastewater Monitoring and Control Using Cloud Based IoT System

286 Ramanujam, Srivaramangai; Karkera, Prateek
Optimization Techniques of Quantum Neural Network for Image Classification

292 S, Lilly Sheeba; Madhu Sudhana Vamsi, Vutukuri; Sonti, Hemanth; Ramana, Polakattu Venkata
Intelligent Traffic Sign Detection and Recognition Using Computer Vision

293 Sharma, Yogesh Kumar; Arya, Leena; Kumar, Ramakrishna
Digital Guardians: Enhancing Women's Security with Artificial Intelligence and IoT

299 Pandiyarajan, Pandiselvam P
Novel Predictive Machine Learning Approach for Identification of Microbial Niche and Microbial Communities from Omics Dataset of Kaveri River, Tamil-Nadu, India

302 Hossain, Md Zahid; Zaman, Syed Rohit; Islam, Muhammad Nazrul
User Experience and Usability Challenges in E-Tourism: Bangladesh Perspective

303 Abimouloud, Mouhamed Laid; Bensid, Khaled; Elleuch, Mohamed; Aiadi, Oussama; Kherallah, Monji
Mammography Breast Cancer classification using Vision Transformers

310 El Amrani, Lobna; Moughit, Mohamed
Cultivating Knowledge: Exploring the Impact of Virtual and Augmented Reality on Education

313 Bahar, Maryam Hussein; Noori, Hadeel
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362 Marzougui, Fatma; Elleuch, Mohamed; Kherallah, Monji
IoT and Blockchain in Agriculture: Architecture and Research Issues

364 El Gougi, Badreddine; Ridouani, Mohammed; Hassouni, Larbi
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366 Dhankhar, Amita
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368 Goomer, Rushil; Ramanna, Sheela
Exploring Machine Learning Approaches for Precipitation Prediction: Post Processing of Daily Accumulated North American Forecasts

374 Sakhrawi, Zaineb; Labidi, Taher; Sellami, Asma; Bouassida, Nadia
Data Quality Improvement for More Accurate Regression Test Effort Estimation

377 Schirmer, Ricardo; Cukla, Anselmo R; Strapazzon, Lucas; Dutra, Gustavo Arthur; Rocha Alves FIlho, Claudenir; Flores Sampaio, Bruno Gabriel; Longo, Adriano José; Tello Gamarra, Fernando Daniel; Bevilacqua, Solon; Pinto Mota, Fernanda
Design and construction of an AI-controlled sniper robot for use in security and defense systems

379 Prama, Tabia Tanzin; Biswas, Al Amin; Anwar, Md. Musfique
Deep Learning-Based Classification of Conference Paper Reviews: Accept or Reject?

380 Chakraborty, Debjani MRS; Maitra, Sujaan; Saha, Sourav; Halder, Biswajit
A Layout Independent Deep Learning Framework for Recognition of Courtesy-Amount in Bank-Cheque Image

387 Biswas, Akhanda Pal; Yukta; Khandelwal, Riya; Kumar, Ashish
Reassessing Addison's: Engineering Errors in Diagnosis and Ranges

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ISDA 2023: Offline Session 4

December 12, 2023
12:00 GMT - 16:00 GMT
Chairs: Mourad Ellouze, Marwa Amara, Raouia Bouabdallah

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388 Jain, Samyak; Rajput, Aditi; Kaur, Kiranpreet
Python Powered AI Desktop Assistant

389 de Lucena, Paulo Lucena Ponte; Campos, Lidio Lmlc
Classification of Obesity Level using Deep Neural Networks

390 Bouabdallah, Raouia; fakhfakh, fairouz
Overview of Automated Negotiation Approaches Based on Cloud System

391 Silva, Eric Hans M; Ladeira, Marcelo
Lessons learned on summarizing legal documents combining Reinforcement Learning and ChatGPT

393 Vagin, Andrey; Romanov, Vitaly; Ivanov, Vladimir
Evaluating Baselines for Type Inference: Static Code Analysis versus Large Language Model

Loan Approval Prediction Using Machine Learning

443 V, Vinothina
Intelligent Analysis of Student Feedback in Post-Course Assessments using a Multiclass Classification Model

444 Shamraj, Aneesh; Sathe, Gargi; Surve, Aditya; Patil, Nahush J; Saxena, Kumkum
Cross-Language Assessment of Mathematical Capability of ChatGPT

447 Sankaranarayanan, Bathrinath; M, Shivabalakrishnan; K, Sivasabarish; A, Someshwar Reddy; Priyanka, Ramesh; K, Koppiahraj; RKA, Bhalaji
Fuzzy DEMATEL-Based Assessment of Barriers in 2 and 4 Wheelers Workshop Automation: A Comprehensive Analysis

449 Sghaier, Ranim; El Hog, Chiraz; Ben Djemaa, Raoudha; Sliman, Layth
A review on SLA monitoring based on blockchain

450 Ben rjeb, Hanen; Ben Djemaa, Raoudha; Zorgati, Hela; Sliman, Layth
Service Placement Problem for IoT Applications on Fog Computing

453 Churi, Ayush; Shakti, Aaryan; Agrawal, Sahil; Khotele, Jeetisha; Sayyad, Javed K.; Narkhede, Parag
Health Monitoring System for Mountaineers Using IoT

457 Charan Reddy, K Y Nisheeth; Radha, S; K, Vasanth; Let G, Shine; Perattur, Nagabushanam
UAV and SAT images to monitor climate conditions and crop yielding – A survey

459 Suman Kumar Suman, Samridhi Kapoor, Sakshi Sharma, Sahil Sharma, Anu Bajaj, Ajith Abraham
Feature Importance Analysis and Model Performance Evaluation for Real Estate Price Prediction

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December 13, 2023

HIS 2023: Offline Session 5

December 13, 2023
12:00 GMT - 16:00 GMT
Chairs: K. Anitha Kumari, Ambili PS, Vadivel S M

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5 Krishnan A, Aravind; Deepak, Gerard
OGDES: An Automatic Ontology Generation Mechanism for Diversity, Equity and Inclusion Studies as a Prospective Domain of Choice Integrating Semantic Intelligence

7 Dani, Virendra; Panadiwal, Himanshu; Anjana, Rahul; Dhawan, Manoj; Kothari, Shubham
Facial Occlusion Detection using Convolutional Neural Network

10 Lung, Rodica Ioana
A Game-theoretic Approach to Ensemble Stacking Classification

14 Brandenburg, Thiago; Geremias, Vinícius; Miranda, Fabiano; Fischer, Gustavo; Silva Filho, José; Parpinelli, Rafael S
Atmospheric Corrosion Prediction in Metallic Materials Using Machine Learning

50 Chalamayya Batchu Veera Venkta Satya; Premchandran, Divya
Optimized Supplier recommendation using hybrid intelligent system for a private block chain network

52 Mili, Rahma; Khaskhoussy, Rania; Maalel, Ahmed; Bouaziz, Bassem; Gargouri, Faiez
Eyebrow, blink and head movement artifacts detection from EEG signals using machine learning techniques

53 Leandro Martins Candido, Antonio; Maia, José Everardo B
Domain adaptation with DIET-RASA and XLNet in urgent post detection

55 Rubaidi, Zainab Saad; Ben Ammar, Boulbaba; Ben Aouicha, Mohamed
Handling Imbalance Functional and Non-functional Software Requirement Classification Based on Machine Learning Algorithms

58 Hilali, Intissar; Arfaoui, Nouha; Ejbali, Ridha
Analysis and Comparative of Object Detection Models for Tourism POIs Recognition

62 Trung, Ha Duyen
Design and Implementation of Wi-Fi and ZigBee IoT Devices for Short-range IoT Connectivity

63 Slimen, Sonia; Mezghani, Anis; Kherallah, Monji
Skin cancer detection and classification using CNN and SVM

67 Kaur, Gunseerat; Batth, Ranbir Singh
Strategizing amalgamation of intelligent traffic management and smart vehicles: Assessment of techniques and tools

69 Syed, Saba Raoof; M. A., Saleem Durai
A Comparison Study of Machine Learning and Deep Learning Approaches for Diabetes Mellitus Prediction

72 El Mobaraky, Abdessamad; Kouiss, Khalid; Chebak, Ahmed
Comparative Analysis of Different IT2 FLC-Like PID Schemes for Pitch and Roll Control of a Fixed-Wing UAV

74 Ben Aissa, Fatma; chaibi, nesrine; Mejdoub, Mahmoud; Zaied, Mourad
GAN-deepfakes detection using ELA and Deep Learning

HIS 2023: Offline Session 6

December 13, 2023
12:00 GMT - 16:00 GMT
Chairs: Logeswaran Kanakachalam, Nagendra Panini Challa, Debendra Muduli

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77 Ouerhani, Nourchene; Maalel, Ahmed; P. Drljača, Dalibor; Ben Ghezala, Henda
Towards a Deep Learning Post-Traumatic Stress Disorder Dialogue System based on Transformers

79 Jlidi, Nozha; Jemai, Olfa; Bouchrika, Tahani
Human pose estimation for Action Recognition in sports video using GNN

81 Naily, Rehab; yahia, siwar; Zaied, Mourad
Comprehensive Comparison of Machine Learning Models with DWT for EEG-Based Epilepsy Prediction: Including Residual and Deep Neural Networks

123 Santos, Guilherme; Guerreiro, Rita Filipa C; Santos, André S; Tereso, Anabela Pereira; Oliveira, José; Bastos, João
Load Balancing in Parallel Machines: A Literature Review

126 Prama, Tabia Tanzin; Anwar, Md. Musfique
Sylheti to Standard Bangla Neural Machine Translation: A Deep Learning-Based Dialect Conversion Approach

127 Ben Salah, Rayen; El Mannai, Hela; Zaied, Mourad
An enhanced medical image watermarking based on Beta Chaotic Map

129 Labidi, Hamida; Chaabani, Abir; Ben Azzouna, Nadia; Hassine, Khaled
Hybrid genetic algorithm for solving an online vehicle routing problem with time windows and heterogeneous fleet

131 Abbes, Yosra; Sakhrawi, Zaineb; Sellami, Asma; Bouassida, Nadia
Classifying Security Change Requests in IOT-based Systems using LSTM deep learning model

132 Gerard Deepak; Achyuth Samavedhi
IIFSDR: Intelligent Integration Framework for Scientific Document Recommendation

133 Batita, Safa; Makni, Achraf; Amous, Ikram
Towards an efficient and intelligent Graph model-based Cooperative Intersection Collision Avoidance Systems

137 Gaskó, Noémi; Képes, Tamás-Zsolt; Suciu, Mihai M; Lung, Rodica
Critical node detection in weighted networks. An application in data analysis

138 Umoh, Uduak Augustine; Asuquo, Daniel E; Robinson, Samuel Akpan; Dan, Emmanuel
Intelligent System for Spectrum Detection and Selection in Cognitive Radio Networks

139 Intissar, Dhrari hajsalem; Amal, Abbes
A New Deep Learning Method for Delineating Early Gastrointestinal Cancer

140 Mocelin Júnior, Nilton J; Fiorese, Adriano; Parpinelli, Rafael S
A Comparison Between Traffic Classification Models for Bandwidth Management in Software-Defined Networks

142 Rocha, Gustavo G; Lobato, Fabio; A. C. Cortes, Omar
Performance Evaluation of Metaheuristics Using TensorFlow Parallelism on GPU

143 Agarwal, Hrriday; Raghav, Lakshay; Nagar, Krittin; Susan, Seba
K-Nearest Neighborhood based Hybrid Recommendation System using Collaborative Filtering and Meta-Learning

144 Llasag Rosero, Raúl Homero; Silva, Catarina; Ribeiro, Bernardete
Evaluating Collaborative Forecasting in Non-Horizontal Federated Learning

147 Pereira, Jose; Rosa, Joana; Antunes, Nuno; Santos, Pedro; ferreira, joao carlos A
Image Classification based on Federated Learning using PETA Dataset

148 Cordeiro, Manuela; ferreira, joao carlos A; Fernandes, Vitor
Enhancing Agriculture Products Traceability Towards Sustainability

152 S, Adithya; S, Bhuvaneswari; V, Subramaniyaswamy
Graph Neural Network-based Collaborative Filtering for Movie Recommendation

153 Prama, Tabia Tanzin; Anwar, Md. Musfique
SobdoKrom: An Unsupervised Bengali Keyword Extraction Model using Pre-trained Large Language Model

158 Sukirti Sharma, Anu Bajaj, Ajith Abraham
AI and ML in Ovarian Cancer Diagnosis: A Comprehensive Survey and Critical Analysis

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December 14, 2023

IAS 2023: Offline Session 7

December 14, 2023
08:00 GMT - 12:00 GMT
Chairs: Meenakshi Munjal, B. Veera Jyothi, Shrinivas D Desai

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9 Yede, Pranav H; Vichare, Rohit N; Shelar, Aarya; Shingane, Priyanka V
Decentralized and Secure Verification Process Using Interplanetary File System (IPFS) and Web3 Storage: A Comprehensive Study

11 Sairam, Lakshmi; Shaik, Ayesha; Ananthakrishnan, Balasundaram; Sai Nithin, Mattapally; Kovvuri, Uday Surya Deveswar Reddy; M, Nivedita
Adaptive DoubleU-Net for Pothole Segmentation with Stagnant Water Detection

12 Sai Nithin, Mattapally; Shaik, Ayesha; Ananthakrishnan, Balasundaram; Sairam, Lakshmi; Kovvuri, Uday Surya Deveswar Reddy; M, Nivedita
Artificial Intelligence Techniques in WildLife Classification-A Review

13 Rout, Shasanka Sekhar
A Comparative Implementation of 12-bit and 14-bit Heterogeneous Adders

14 Kumari, Shabnam; Tiwari, Shrikant; Tyagi, Amit Kumar
Spatial Computing: Opportunities and Challenges for the Next Decade

15 Tyagi, Amit Kumar; Rao, B V A N S S Prabhakar; Soundararajan, Gopalakrishnan
Modern Education Post COVID 19: A Comparative Analysis

16 Ouhssini, Mohamed
Enhancing Cloud Security: A Study on the Performance of Ensemble Optimized DNNs for DDoS Detection

18 Sharan, Bhagwati; Raja, Manjula; Ghosh, Anirban; Avinash, Mallampati Venkata; Lalitha P, Kavya; Sai Prudhvi Teja, Puli Venkata
Analysis of THz Signal in Multi-layered Biological Tissues for in-vivo Communications: Heart Monitoring

19 Baker, Mohammed Rashad; ETEM, Taha; Jihad, Kamal H.; Buyrukoğlu, Selim
The Role of Hyperparameter Tuning in Phishing Website Classification: A Comparative Analysis of ML Models

20 Sucharitha, G; Hari Prasad, P. Venkata; Roy, Mrs. Subhadra Deb; Batabyal, Mr. Surajit; Meenakshi; Raghuvanshi, Abhishek
Adaptive Intrusion Detection System Towards Secure Internet of Things Enabled Intelligent Healthcare Industry

21 Petrovic, Aleksandar; Jovanovic, Luka Z; Venkatachalam, K.; Zivkovic, Miodrag; Bacanin, Nebojsa; Budimirovic, Nebojsa
Anomaly detection in electrocardiogram signals using metahersutic optimized time-series classification

22 Kindo, Almissi Amed; Bassole, Didier; Koala, Gouayon; Sie, Oumarou
DDoS Attacks Simulation on a Storage Cloud: Impacts and Appropriate Security Mechanisms

38 Singh, Suyogita; Verma, Satya Bhushan; Gupta, Bineet Kumar
Federated Learning for GDPR Compliance

40 Jabri, Abdou-essamad; Azizi, Mostafa; Drocourt, Cyril; Utard, Gil
Exploration of Medical IoT security with blockchain

41 Asanov, Alan; Fedoseev, Victor
Semi-fragile image watermarking based on CNN

42 Ezzeddini, Lotfi; Talha, Amira; benmohamed, Chams Adhouha
Blockchain implementation for Sustainable and Transparent Fisheries

43 Asanov, Alan; Fedoseev, Victor
A zero watermarking method using radial point density for 3D model copyright protection

51 Ali, Mohd Mahboob; Chvs, Harshavardhan; Gundumalla, Sai Teja; Jyothi, B.Veera; Kumar, L Suresh
Real-time Smart Waste Management: Arduino-Enhanced Trash Detection and Classification

54 Jyothi, B.Veera; Mangaiahgari, Vaishnavi; Kandi, Meghana; Vangoor, Sidhartha Reddy; Ramalakshmi, Eliganti
AgriCrop - Crop Recommendation Through Soil Analysis and Plant Monitoring

59 Wakhloo, Abhinav; Ghergulescu, Ioana; Moldovan, Arghir-Nicolae
Investigation of WiFi Security Auditing Tools for Evil Twin Attacks and Detection

61 Omar, Satyam
An Advanced Multivariate Convertible Ring Signature Scheme

66 Ben Abdelghani, Sarra; Nabli, Hajer; Ben Djemaa, Raoudha; Sliman, Layth
Blockchain-Integrated Technologies to Address Counterfeit Drugs in the Pharmaceutical Supply Chain

68 Prateek Khokar, Anu Bajaj, Ajith Abraham
A Novel Security Enhancement of Caesar Cipher Encryption Technique

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SoCPaR 2023: Offline Session 8

December 14, 2023
12:00 GMT - 16:00 GMT
Chairs: Ritika Wason, Beebi Naseeba, Raman Chadha

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143 Manghirmalani Mishra, Pooja; Saboowala, Rabiya
Predicting in-Service Teachers' Epistemological Beliefs based on their TL Conception using Ensemble Learning

163 F, Ajesh; Philip, Felix M; Jims, Anupama; Alapatt, Bosco Paul
IoT Wearable Medical Device for Heart Disease Recognition Based ML and DL: A Classification Approach

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December 15, 2023
08:00 GMT - 12:00 GMT
Chairs: André Serra e Santos, Rajanikanth Aluvalu, Nanda Dulal Jana

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11 Gunasheelan, Akshith; Deepak, Gerard
SBRIR: A Strategic Blog Recommendation Framework Employing Integrative Learning-Reasoning Paradigm

15 Kerestes, Szabolcs; Gaskó, Noémi
An evolutionary framework for different variants of the fair layout optimization problem

18 Stankovic, Marko; Jovanovic, Luka Z; Bozovic, Aleksandra; Budimirovic, Nebojsa; Zivkovic, Miodrag; Bacanin, Nebojsa
Exploring The Potential Of Combining Mel Spectorgrams With Neural Networks For Acoustic Speed Violation Detection

20 Bahadure, Nilesh Bhaskarrao; Patil, Prasenjeet Damodar; Kalbande, Sanjula; Pipalatkar, Shailaja; Nagar, Somesh; Kuhikar, Om
Machine Learning-based Music Recommendation System from Spotify

26 Saravanan, T
Improving data delivery and energy efficiency in MANETs: a stacking based SVM approach for multipath

28 Arora, Rameshwar
The Use of AI in Pharma: Results from mapping of Peer-reviewed and Grey literature across the world

42 Cherish, Reshma R; S P, Jeno Lovesum
A Study on Applications of Natural Language Processing in Medical Data

43 Essah, Richard; Ajibade, Samuel-Soma M.
Utilization of Machine Learning Algorithms to Monitor the Growth Path of Fishes in Marine Aquaculture

45 Acharya, Badal; Parida, Priyadarsan; Panda, Ravi Narayan; Mohapatra, Pradyumna Kumar
Subspace-Based Adaptive Approach for Blind Channel Estimation and Equalization

58 Krishnan, Aravind; Deepak, Gerard; Vijayan, A. Santhana
OSOL: Open Linked Data Generation using Semantics Oriented Learning Paradigms

62 Krishnan A, Aravind; Deepak, Gerard; Vijayan, A. Santhana
TCGC: Tweet Classification and Recommendation for Geographical Catastrophes and Events

63 Jihad, Kamal H.; Baker, Mohammed Rashad; Mahmood, Ozlam Abdulhakeem; Umar, Shahla Uthman; B D, Parameshachari
Emotion-Driven Predictive Modeling of Airline User Reviews: A Comparative Analysis of ML Models

67 Singh, Harmanjot; Deepak, Gerard
MetaDiffBlog: A Metadata driven Blog Tag Recommendation Framework Using Semantics and Differential Evolution

75 Sengupta, Rakesh; Shukla, Anuj; Janapati, Ravichander; Verma, Bhavesh
Temporal dynamics of human perceptual averaging using a neural network model

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December 15, 2023
12:00 GMT - 16:00 GMT
Chairs: Meenakshi Munjal, Shilpa Gupta, Rose Bindu Joseph P

IBICA 2023

9 Barranha Rodrigues dos Santos, Nuno M; Curado Silveirinha, Joel; ferreira, joao carlos A
Blockchain's Potential in International Criminal Justice: A Blue Ocean Analysis and Literature Review

14 Mkhwanazi, Sthembiso; Ezugwu, Absalom E
The Future of News Recommendation: A Blend of User Preferences, Content Analysis, and Social Signals

16 Guehria, Sonia Dr; Belleili, Habiba; Azizi, Nabiha
A Comparative Analysis of Ensemble Learning Methods for Multi-Label Classification on Bioinformatics

22 Pereira, Jose; Rosa, Joana; Ferreira, Joao Carlos
A Image Classification based on Federated Learning using PETA Dataset

23 Cale, Daniel; Franco, Adriana; Rocha, Joao; Ferreira, Joao Carlos
A Gamification System for Eco-Driving: Enhancing Driver Motivation and Fuel Savings through Game Mechanics

25 S, Suriya; R, Sanjay Krishna
Hybridizing Ant Colony Optimization with Other Optimization Algorithms for Solving Complex Problems

27 Bose, Nadashree; Joshi, Hemlata
Optimizing Healthcare Analytics: A Zero-Inflated Poisson Approach to Pediatric Emergency Room Visits

28 Das, Tanmoy; Joshi, Hemlata
Enhancing Education Policy Estimation: A Novel Ridge Fuzzy Regression Approach for Handling Multicollinearity with Fuzzy Input Data

HCU: A Multi-lingual Health Claim Dataset and its NLP Applications

WICT 2023

Plenary speaker Abstracts and Biographies

Stefka Fidanova

Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, Bulgaria

Title: How Ants Can Solve Engineering Problems

Abstract: We can learn a lot by observing nature. There is no waste with it. Everything is done in the most economical, optimal way. Particularly impressive is the collective intelligence of a group of individuals working together. Bees, ant colonies, bird flocks, fish passages, etc. can be given as examples of group intelligence. Animals that do not have a high level of individual intelligence deal with difficult problems using a collective approach. This gave scientists the idea to create algorithms inspired by nature, mimicking the collective intelligence of some animals. These are the so-called metaheuristic methods. There are complex optimization problems coming from real life and industry that require large computing resources to find close to the optimal solution. For the most part, these are combinatorial optimization problems. Exact methods and traditional numerical methods are not suitable for this type of problems. In this case, the only possibility is metaheuristic methods. Their advantage is quickly finding a good solution. Their disadvantage is that their accuracy is not guaranteed. In cases where the accuracy of the solution can be compromised and it is more important to find it quickly, metaheuristic methods are preferable. The unique behavior of ants in nature and their ability to always find the shortest path between the nest and the food source, gives the idea for the creation of the ants' method. The original idea has been expanded and modified by different researchers to apply to a wider class of tasks.

Biography: Stefka Fidanova is Professor of Computer Science at Institute of Information and Communication Technologies, Bulgarian Academy of Sciences. Her research interests include theory, methods, applications of combinatorial optimization and parallel algorithms. She heads the research group of Parallel Algorithms and Machine Learning. She has authored over 200 refereed journal, proceedings and collection papers, edited 13 proceedings, collections and special issues and written a 2 monograph. She belongs to the editorial boards of several international journals. She has received Career Award 2018 of Marie Curie Alumni Association of EU.

Sebastian Ventura

University of Cordoba, Spain

Title: Advance Machine Learning to Improve Predictive Maintenance

Abstract: Maintenance costs constitute a significant portion of the overall operational costs in any manufacturing or production facility. The proportion can vary widely, ranging from 15% to 60% of the production costs, depending on the industry. Recent studies on the efficiency of maintenance management reveal that about a third of these costs are squandered due to unnecessary or incorrectly executed maintenance tasks. Therefore, it is evident that the role of maintenance activities has a significant influence on overall productivity. Today's manufacturing setups employ a massive number of sensors that collect data at rates ranging from hundreds to thousands of samples every second. Predictive maintenance leverages this vast data pool to forecast system malfunctions or failures, enabling the scheduling of maintenance activities right before issues arise. Predictive maintenance has seen significant advancements through the incorporation of machine learning methodologies. Nevertheless, the field continues to be a work in progress with ample room for improvement. This presentation aims to shed light on recent innovations that focus on enhancing the quality, resilience,

and dependability of predictive maintenance algorithms. We will explore cutting-edge approaches that promise to push the boundaries of what predictive maintenance systems can achieve.

Biography: Sebastián Ventura has been full professor of Computer Science and Artificial Intelligence at the Universidad de Córdoba since April 2016 where leads the KDIS research group since its creation at 2009. He also holds the positions of Affiliated Professor at Virginia Commonwealth University (Richmond, USA). In the last five years, Prof. Ventura has published 50+ high-impact papers, many in collaboration with global institutions, and has a total of over 150 articles in prestigious journals. His interdisciplinary work, particularly in medicine and industry, has earned him 24,000+ citations and an h-index of 59. He has also contributed to around 200 books and conferences, authored and edited multiple books, and his four most notable papers each have over 1,500 citations. Additionally, he has led 10 national/international projects requiring interdisciplinary collaboration and has advised 5 doctoral theses in the past year, bringing his career total to 22. Ventura has held leadership roles in several international conferences, including serving as the general chair for EDM in 2009, ISDA in 2011 and 2012, and the IEEE CBMS Symposium in 2019. He is also a member of the program committees for a variety of international conferences. In addition to reviewing for multiple prestigious publications since 2006, he serves as an associate editor for journals like Engineering Applications of Artificial Intelligence, Information Fusion, IEEE Trans. on Cybernetics, and is the editor-in-chief of Progress in Artificial Intelligence journal.

Diego Oliva

Universidad de Guadalajara, Mexico

Title: Metaheuristic Algorithms: Open Challenges in Engineering

Abstract: Engineering is changing and the use of intelligent algorithms to solve different challenges is more common nowadays. For example, in logistics, different problems are solved by using optimization algorithms as metaheuristics. In the same way, images are widely used in different engineering domains, and the use of metaheuristics in combination with other intelligent approaches permits to perform the proper analysis of the scenes. However, the problems in engineering are still growing and it is important to have powerful methods that permit improve the processes in an effective way. In this talk, the principles of optimization and the basic concepts of metaheuristics are explained. Their classification and importance are also discussed. In this context, they have also analyzed some important points related to multiobjective optimization. Finally, some challenges in different domains of engineering are discussed.

Biography: Diego Oliva received the B.S. degree in Electronics and Computer Engineering from the Industrial Technical Education Center (CETI) of Guadalajara, Mexico, in 2007, the M.Sc. degree in Electronic Engineering and Computer Sciences from the University of Guadalajara, Mexico in 2010. He obtained a Ph. D. in Informatics in 2015 from the Universidad Complutense de Madrid. Currently, he is an Associate Professor at the University of Guadalajara in Mexico. Since 2020 he has been a visiting professor at the Tomsk Polytechnic University in Russia. He has the distinction of National Researcher Rank 2 by the Mexican Council of Science and Technology. Since 2017 he has been a member of the IEEE. Diego Oliva is co-author of more than 100 papers in international journals and different books. He is part of the editorial board of IEEE Access, Plos One, Mathematical Problems in Engineering, IEEE Latin America Transactions, and Engineering Applications of Artificial Intelligence. His research interest include Evolutionary and swarm algorithms, hybridization of evolutionary and swarm algorithms, and Computational intelligence.

Theresa Schmiedel

University of Applied Sciences and Arts Northwestern Switzerland, Basel, Switzerland

Title: Value-Sensitive Design of Socially Intelligent Agents

Abstract: With the rise of large language models that can generate human-like conversations, physical and virtual intelligent agents are all of a sudden able to communicate with humans in very smooth way. While such conversations can leave a very positive impression, we can increasingly identify concerns

that interactions with intelligent agents can become harmful, for example, through manipulation. Value-sensitive design (VSD) is an approach that calls for the consideration of human values in the design of technology. In the context of intelligent agents, VSD provides a relevant perspective to reflect on the way we would like intelligent agents to be designed so they interact in a socially appropriate way. This talk uses VSD as a lense to discuss the notion of “socially” intelligent agents.

Biography: Theresa Schmiedel is a professor at the Institute of Information Systems at FHNW. After her studies in economics at the University of Hohenheim, she did her PhD and habilitated at the University of Liechtenstein. Her research interests focus on social phenomena in the information systems field. Particularly, her interests include social robots, culture, values, human-centered design, intelligent agents. She heads the Competence Center Technology, Organization, and People at FHNW.

Nuno Bettencourt

Instituto Superior de Engenharia do Porto, Portugal

Title: Blockchain and DLT: Where Does It Stand

Abstract: Blockchain and Distributed Ledger Technology (DLT) are reshaping industries, but their current standing is multifaceted. This talk, "Blockchain and DLT: Where Does It Stand," provides a snapshot of their status. We'll explore core principles, emphasizing decentralization, transparency, and security. Industry use cases will be dissected, showcasing disruptions in finance, supply chain, and healthcare. However, challenges like scalability, regulation, and interoperability persist. This presentation addresses some of these obstacles and surveys ongoing solutions. Attendees will gain insights into research shaping the future of these technologies. The talk overview offers a nuanced understanding of the evolving landscape, valuable for professionals, researchers, and enthusiasts. By analysing achievements and challenges, it aims to spark a dialogue on their trajectory, fostering collaboration and innovation in this dynamic field.

Biography: Nuno Bettencourt holds a Ph.D. in Informatics Engineering from the Universidade de Trás-os-Montes e Alto Douro (UTAD), Portugal. He is an Associate Professor for the Department of Informatics Engineering at Institute of Engineering of Porto (ISEP). He nourishes special interest for software engineering and systems architecture, model driven engineering, software quality assurance and adoption of agile methodologies for the development and management of IT projects. In addition to lecturing, he is also a researcher, has authored several articles and chapters. His main research interests are Semantic Web, Information Privacy, Content Sharing on the Internet, Software Development Quality, Artificial Intelligence and Blockchain. He’s also the current IEEE Portugal Blockchain Working Group Chair.

João Pedrosa

INESCTEC, Portugal

Title: AI in Medical Imaging: Growing Pains and How to Dig Deeper

Abstract: The challenging and time-consuming nature of medical image interpretation makes it an extremely attractive field for the application of artificial intelligence (AI) and the advances made in the last few years have allowed to achieve near-human performance in several imaging modalities. Chest radiography is a particularly interesting example as it is an almost ubiquitous medical imaging modality and this high image throughput has allowed for the creation of large annotated datasets. These have in turn been used to train deep learning systems with excellent performance but are these systems ready for the clinic? In this presentation, the main challenges in the development and application of deep learning systems in high stakes situations such as medical imaging - and in particular chest radiography - will be presented with a focus on interpretability and a case study on the COVID-19 pandemic.

Biography: João Pedrosa was born in Figueira da Foz, Portugal, in 1990. He received the M.Sc. degree in biomedical engineering from the University of Porto, Porto, Portugal, in 2013 and the Ph.D. degree in biomedical sciences with KU Leuven, Leuven, Belgium, in 2018 where he focused on the development of a framework for segmentation of the left ventricle in 3D echocardiography. He joined

INESC TEC (Porto, Portugal) in 2018 as a postdoctoral researcher and is an invited assistant professor at the Faculty of Engineering of the University of Porto since 2020. His research interests include medical imaging acquisition and processing, machine/deep learning always with a focus on applying research for improved patient care.

Christine Zarges

Aberystwyth University, UK

Title: Mathematical Foundations of Randomised Optimisation Algorithms

Abstract: Randomised Optimisation Algorithms such as evolutionary algorithms, simulated annealing or estimation of distribution algorithms implement a general idea of how to search for solutions for (hard) optimisation problems. They iteratively sample candidate solutions from a search space and assess the quality of a solution using an objective function. They provide a powerful and flexible way of tackling different complex problems where classical optimisation methods fail. While the general idea is to apply such algorithms 'right out of the box', in practice it is almost always necessary to adjust them to the problem at hand by modifying the overall search strategy to achieve acceptable performance. It is thus highly desirable to obtain a clear understanding of the working principles of different operators and strategies. Mathematical analysis can provide such an understanding, including properties of problems and operators, parameterisation, and limitations of different approaches, and can inspire the design of better algorithms. Over the last few decades significant progress on mathematical foundations of Randomised Optimisation Algorithms has been made. This talk will provide an overview of the main lines of research in the area with a focus on runtime and anytime analysis in combinatorial optimisation. It will highlight example results and illustrate how these results can be used for the modification and development of algorithms in relevant applications. I will also point out future research directions with the aim to initiate a dialogue between researchers interested in theory and applications.

Biography: Christine Zarges is currently a Senior Lecturer (Associate Professor) in the Department of Computer Science at Aberystwyth University which she joined as a Lecturer in 2016. Before, she held a postdoctoral research position at the University of Warwick, UK, and a Birmingham Fellowship at the University of Birmingham, UK. She obtained her PhD from TU Dortmund, Germany, in 2011. Christine's research focuses on heuristic search in the context of optimisation. She is interested in the theoretical analysis of all kinds of randomised search heuristics such as evolutionary algorithms and artificial immune systems with the aim to understand their working principles and guide their design and application. She is also interested in applications in combinatorial optimisation as well as computational and theoretical aspects of natural processes and systems. She has given tutorials on these topics at various conferences and contributed to the organisation of such conferences in different capacities, most importantly as track, programme, and workshop chair at GECCO, PPSN, FOGA and EvoCop as well as local chair of EvoStar 2024. She is member of the editorial board of Evolutionary Computation (MIT Press) and Associate Editor of Engineering Applications of Artificial Intelligence (Elsevier). She is a member of the Executive Board of SPECIES, the Society for the Promotion of EC In Europe and Surroundings and a Manage Committee member for the UK in European research networks concerned with Randomised Optimisation Algorithms (COST actions CA15140 and CA22137).

Dalia Kriksciuniene

Vilnius University / Kaunas University of Applied Sciences, Lithuania

Title: Application of Artificial Intelligence Methods in The Neurology Healthcare Domain

Abstract: The role of technology in healthcare became pervasive and raise expectations for assisting medical professionals and treatment efficiency in broad medical problem areas. However, its application has not yet reached its full potential, as the most suitable data sources and the methods for their processing and analysis are still in their development and evaluation stage. The research discussion focusses to comparative evaluation of scientific literature and analysis of experimental research results in the interdisciplinary domains of artificial intelligence, its application in neurology and emerging healthcare approach of person-centred care.

The neurology domain of healthcare has reached high level of urgency in many countries worldwide. It has attracted attention of research due to severity of outcomes of neurological disorders, factors hindering accuracy of diagnosis, high risk of repeated cases (about 40% for stroke), and slow and inefficient rehabilitation period. The neurological disorders (such as stroke) often reduce capability of persons to take care of themselves during rehabilitation period, and require to involve family care givers and community efforts to fulfil the treatment and rehabilitation programs. The complexity of the domain arises need of various data sources and their extraction models, such as health measures and expert evaluation data. Although these data can potentially be scattered, unstructured and hard to uncover, the AI methods bring potential for their inclusion to efficient healthcare. The experimental research of neurological patient enabled to explore and highlight the challenges and implication of applying AI methods for the domain.

Biography: Dalia Kriksciuniene is a professor of Vilnius University and Kaunas University of Applied Sciences in Lithuania. Her applied research area is Marketing Information Systems. Her expertise lies in the field of data analytics and marketing technology solutions, with a particular focus on computational intelligence algorithms, artificial intelligence in electronic marketing, digital marketing, e-commerce, and social network research. D. Kriksciuniene has made significant contributions to the academic community through her publications in ISI WOS journals, including Neurocomputing, Transformations in Business and Economics, Advances in Intelligent Systems and Computing, and Information Technology and Control. Additionally, she serves as an Associate Editor for "Electronic Commerce Research and Applications (ECRA)" and actively participates as a PC member in various international conferences. Furthermore, she contributes her expertise as a reviewer for several prestigious journals.
ORCID: 0000-0002-0730-3763

Ke Feng

Singapore-ETH Centre, The National University of Singapore, Singapore

Title: Digital Twin-Driven Health Management and Remaining Useful Life Prediction of the Gearbox Transmission System

Abstract: The gearbox transmission system plays a vital role in advanced manufacturing, aerospace, renewable energy, vehicle, and mining system. Its degradation and failure would cause unexpected economic loss and even serious accidents. For example, the degradation and failure of the gearbox will impair the performance of the machine tool, affecting the production quality and quantity significantly and resulting in enormous economic loss. Therefore, monitoring the health condition of the gearbox transmission system is of great significance. However, the gearbox transmission system usually operates in harsh working environments, and it is difficult to conduct regular manual inspections and maintenance. Thus, the use of advanced online algorithms to monitor the degradation status of the gearbox transmission system and predict its remaining useful life (RUL) can bring significant benefits to industry practices. Digital twin (DT) is a virtual representation (mirror) of a physical structure or a system in real space along its lifecycles. Through real-time interaction between the virtual model and physical structure, the degradation status of the system and its RUL can be reflected and evaluated effectively. Thanks to its unique specialty, DT has recently received considerable attention from the research community. However, due to the complex structures and harsh operation conditions, research on DT-based gearbox transmission system RUL prediction is limited. Moreover, existing conceptual approaches have limitations in indicating the specific contact status and providing insights into the degradation stages of gearbox transmission systems, which greatly benefit RUL prediction. To this end, this work presents a systematic and practical digital-twin technology for gearbox transmission systems RUL prediction, including the development of the realistic virtual model, real-time interaction between the virtual model and physical structures, and ‘transfer learning’ for a wider mechanical transmission system RUL prediction. This work can significantly benefit the health management of the gearbox transmission system and bring significant benefits to various industrial applications, including advanced manufacturing equipment/machinery, industrial machinery, aerospace applications, and wind turbines.

Biography: Ke Feng is a Marie Curie Fellow affiliated with Imperial College London and Brunel University London. He earned his Ph.D. from the University of New South Wales, Australia, in 2021. Following his doctoral studies, Feng held positions at the University of British Columbia and the National University of Singapore in 2022 and 2023, respectively. Feng's research focuses on digital-twin-based

Remaining Useful Life (RUL) prediction, vibration analysis, structural health monitoring, dynamics, tribology, signal processing, and machine learning. Recognized as a Vebleo Fellow and an Emerging Leader by Measurement Science and Technology, Feng actively contributes to the academic community. He serves as an editor and guest editor for esteemed journals, including Mechanical Systems and Signal Processing, IEEE Transactions on Industrial Cyber-Physical Systems, Engineering Applications of Artificial Intelligence, IEEE Transactions on Instrumentation and Measurement, Measurement, Measurement Science and Technology, Computer Systems Science and Engineering, and Digital Engineering and Digital Twin. In addition to his editorial roles, Feng has played a pivotal role in organizing the International Conference on Aerospace Structural Dynamics (ICASD). He has also served as a section chair for renowned conferences such as ICSMD 2022, SRSE 2022, QR2MSE 2023, and IECON 2023. Furthermore, he has been invited as a speaker at the 2nd Digital Twin International Conference and the 6th International Conference on Dynamics, Vibration, and Control.

Kusum Deep

Indian Institute of Technology Roorkee, India

Title: Use of Nature Inspired Optimization Techniques to Solve Real Life Problems

Abstract: Optimization is the art of selecting "the best" alternative among a given set of options. Optimization problems arise in almost all fields of science, engineering, business, finance and Industry – in fact, in all walks of human activity in which the problem may be mathematically modeled. The traditional optimization techniques are unable to tackle the complexities of real world optimization problems. Recently, a number of nature inspired optimization techniques (NIOT) are being developed and proposed in literature. They are gaining popularity and are considered efficient due to their ability to find a reasonably acceptable solution within a fair amount of computational time. Some of the methods in this category are: Genetic Algorithms, Particle Swarm Optimization, Artificial Bee Colony, Biogeography Based Optimization, Grey Wolf Optimization, Sine Cosine Algorithm, Ant Lion Optimization, etc. This talk will focus on the state-of-the-art of Nature Inspired optimization Techniques. Then the talk will demonstrate the use of these techniques in many real life application problems in various areas of Engineering, particularly in Computer Games, Self-Driving cars, Defence, Medicine, Pattern Recognition, Electrical Engineering, Forecasting of Avalanches, Earthquake Engineering, etc.

Biography: Kusum Deep, is a full Professor (HAG), with the Department of Mathematics as well as Joint Faculty at the Mehta Family School of Data Science and Artificial Intelligence at the Indian Institute of Technology Roorkee, India. Also, she is a Visiting Professor, Liverpool Hope University, UK, University of Technology Sydney, Australia and University of Wollongong, Australia. With B.Sc Hons & M.Sc Hons. School from Centre for Advanced Studies, Panjab University, Chandigarh, she is an M.Phil Gold Medalist. She earned her PhD from UOR (now IIT Roorkee) in 1988. She has been a national scholarship holder and a Post-Doctoral from Loughborough University, UK assisted by International Bursary funded by Commission of European Communities, Brussels. She has won numerous awards like Khosla Research Award, UGC Career Award, Starred Performer of IITR Faculty, best paper awards by Railway Bulletin of Indian Railways, special facilitation in memory of late Prof. M. C. Puri, AIAP Excellence Award. She is one of the four women from IIT Roorkee to feature in the ebook “Women in STEM-2021” celebrating the contributions made by 50 Indian women in STEM published by Confederation of Indian Industries. According to Stanford University, she falls within top 2 % of the scientists in the world for 2019 and 2020. In 2021 she bagged the prestigious POWER grant awarded by DST, Govt. of India. In 2022 she is leading a collaborative consultancy project with Deloitte. On September 5, 2022, she was awarded Uttarakhand State Level “Excellence in Research of the Year 2022 Award, jointly organized in collaboration with DIVYA HIMGIRI (Premier Weekly News Magazine of Uttarakhand), VMSB Uttarakhand Technical University, Uttarakhand State Council for Science & Technology (UCOST) and Society for Research & Development in Science, Technology and Agriculture (SRADSTA). She has authored two books, supervised 20 PhDs, and published 125 research papers. She is a Senior Member of ORSI, CSI, IMS and ISIM. She is the Executive Editor of International Journal of Swarm Intelligence, Inderscience. She is Associate Editor of Swarm and Evolutionary Algorithms, Elsevier and is on the editorial board of many reputed journals. She is the Founder President of Soft Computing Research Society, India. She is the General Chair of series of International Conference on Soft Computing for Problems Solving (SocProS). She has a vast teaching experience in Mathematics, Operations Research, Numerical and Analytical Optimization, Parallel Computing, Computer

Programming, Numerical Methods, etc. Her research interests are nature inspired optimization techniques, particularly Evolutionary Algorithms, and Swarm Intelligence Techniques and their applications to solve real life problems.

Milan Tuba

Singidunum University, Serbia

Title: Application of Bio-inspired Optimization Algorithms to Problems in Artificial Intelligence

Abstract: Nowadays many optimization problems can be solved relatively easily by deterministic mathematical methods. However, there is a large group of optimization problems of great practical importance that even though they can appear as simple problems with a clear solution they cannot be solved in a reasonable time. These problems can be combinatorial problems or continuous optimization problems with a large number of local optima. For these problems, guided random search by imitating the principles and behaviors observed in natural systems, i.e. bio-inspired optimization algorithms achieved remarkable results. One of the domains where these algorithms have been successfully used is artificial intelligence (AI). For example, digital image classification problems are the core of many applications in computer vision and related fields such as medical diagnostic systems, autonomous vehicles, and security systems. Some of the most important steps in classification are feature extraction and selection. Feature selection problem is a combinatorial problem and bio-inspired optimization algorithms have been widely adjusted and adapted for solving it. On the other hand, the feature extraction step was automatized in recent years by using convolutional neural networks (CNNs) which brought revolutionary improvements in digital image classification. Using almost any CNN architecture for classification will outperform previous classification algorithms but fine-tuning the large number of hyperparameters that define architecture and learning model could further improve results. Due to the large number of hyperparameters that should be considered, this is a hard optimization problem and bio-inspired algorithms have shown good results in tackling this problem.

Biography: Milan Tuba, Professor of Computer Science, Mathematics and Electrical Engineering, Head of the Artificial Intelligence Project at Singidunum University and Vice-Rector of Research at Sinergia University, is included in both versions of the Stanford University list of 2% of the most influential scientists in the world in all disciplines, one for contribution during the entire career and other for contribution in the previous year (for years 2020, 2021, 2022 and 2023). He was Vice Rector for International Relations at Singidunum University, Head of the Department for Mathematical Sciences at State University of Novi Pazar and Dean of the Graduate School of Computer Science at John Naisbitt University. Prof. Tuba is the author or coauthor of around 300 scientific papers (cited around 7,000 times, h-index 49) and editor, coeditor or member of the editorial board or scientific committee of number of scientific journals, Springer books, congresses and international conferences. He was invited and delivered more than 90 keynote and inaugural lectures at international conferences. He received B. S. in Mathematics, M. S. in Mathematics, M. S. in Computer Science, M. Ph. in Computer Science, Ph.D. in Computer Science from University of Belgrade and New York University. From 1983 to 1994 he was in the U.S.A. at Vanderbilt University in Nashville and Courant Institute of Mathematical Sciences, New York University and later as Assistant Professor of Electrical Engineering at Cooper Union School of Engineering, New York. During that time, he was the founder and director of Microprocessor Lab and VLSI Lab, leader of the NSF scientific projects and theses supervisor. He was the mentor of dozens of doctoral and master's dissertations at the Faculty of Mathematics University of Belgrade, Singidunum University, University of Sarajevo, State University of Novi Pazar, John Nesbitt University and University of East Sarajevo. He was teaching more than 20 graduate and undergraduate courses, from VLSI Design and Computer Architecture to Computer Networks, Operating Systems, Artificial Intelligence, Image Processing, Calculus, Probability, Mathematical Statistics and Queuing Theory at numerous universities in Europe and the USA. Prof. Tuba is a member of the National Agency for Accreditation of Universities of the Republic of Serbia. His research interest includes Artificial Intelligence, Deep Learning, Neural Networks, Nature-inspired Optimization Algorithms, Image Processing, Computer Networks. Senior Member IEEE, ACM, AMS, SIAM, IFNA, Executive Board of IASEI.

Aboul Ella Hassanien

Cairo University, Egypt

Title: Innovations for Intelligent Systems: Basics, Trends and Open Problems

Abstract: Intelligent systems (IC) is being rapidly integrated into many areas of computer engineering by exploiting new developments in machine learning areas such as drones, IoT, image processing, biomedical engineering, bioinformatics, and chemoinformatics greatly benefits from recent advances in deep learning. AI and big data are work together to achieve more. This talk will discuss the basics of intelligent systems and their connection with big data. It explores the applications in different areas and highlights the current research. Discuss recent research problems in different applications, including digital twining in heritage, medical imaging, drone-based applications, chemo-informatics, agriculture, and energy.

Biography: Aboul Ella Hassanien is the Founder and Head of the Egyptian Scientific Research Group (SRGE) and a Professor of Information Technology at the Faculty of Computer and AI, Cairo University. Professor Hassanien has more than 1500 scientific research papers published in prestigious international journals and over 60 books covering such diverse topics as data mining, medical images, intelligent systems, social networks, and smart environment. His other research areas include computational intelligence, medical image analysis, security, animal identification, space sciences, telemetry mining, and multimedia data mining.