



Second International Conference on Forthcoming Networks and Sustainability in the AIoT Era

Istanbul Topkapi University | Istanbul, Turkey | January 29-30, 2024

Conference Agenda for Virtual Presentations: Monday, January 29, 2024

(The timing information is based on Turkish Standard Time: GMT/UTC + 3)

| | |
|--|---------------|
| Introductory Speech | 09:00 – 09:10 |
| General Chair Speech Prof. Dr. Onur Osman | |
| Keynote Speech | 09:10 – 09:30 |
| Topic: Medical Informatics as an Augmented Resource for Physicians | |
| Keynote Speaker: Prof. Dr. Saman Shahid | |
| Session – I (Session Chair: Sajjad Nematzadeh) | 09:30 – 11:30 |
| Automated Detection of Pulmonary Embolism Using CT and Perfusion Spectral Images (Gökalp Tulum, Onur Osman, Nazenin Ipek, Mustafa Demir, Sertaç Asa, Kerim Sönmezoğlu, Cansu Güneren, Fuad Aghazada Kübra Şahin) | |
| Calculation of Bit-Error Probability for Direct-Sequence Spread-Spectrum Communications with Multiple-Access Interference of Rayleigh Distribution (Mohammed Albekairi) | |
| Hybrid Kalman Filter-Based MPPT Design for Photovoltaic System in Energy Harvesting Optimization (Waleed Rabeea, Levent Uçun) | |
| Designing and Simulation of Three Phase Grid-Connected Photovoltaic System (AbdulAziz Ahmed Siyad, Mohamed Abdullahi Mohamed, Abdirahman Ali Elmi, Nour Abdi Ahmed, Yakub Hussein Mohamed) | |
| Security & Reliability Concerns of AI on Critical Embedded Systems (Omar Alkhoori) | |
| Economic Evaluation and Designing Photovoltaic Water Pumping System for Agricultural Irrigation: A Case Study in Somalia (AbdulAziz Ahmed Siyad, Abdullahi Mohamed Isak, Ali Osman Özkan) | |
| Crime Prediction using Machine Learning (Hneah Guey Ling, Teng Wei Jian, Vasuky Mohanan, Sook Fern Yeo, Neesha Jothi) | |
| Stacking Ensemble for Pill Image Classification (Faisal Ahmed AB Shofi Ahammed, Vasuky Mohanan, Sook Fern Yeo, and Neesha Jothi) | |
| Determining the Digits of Turkish Sign Languages Using Deep Learning Techniques (Gökalp Çınarer, Emine Karataş) | |
| Enhancing IoT Device Security: A Comparative Analysis of Machine Learning Algorithms for Attack Detection (Abdulaziz Alzahrani) | |
| Smart Cities, Sustainable Paths: Energy Harvesting and Mobility Solutions for Tomorrow's Urban Landscapes (Md Ashraful Islam, Abdulla Al Mamun, M M Naushad Ali) | |
| Session – II (Session Chair: Gökalp Tulum) | 11:30 – 13:00 |
| Cyberbullying Detection for Urdu Language Using Machine Learning (Hamza Mustafa, Kashif Zafar) | |
| Enhancing Biogeographical Ancestry Prediction with Deep Learning: A Long Short-Term Memory Approach (Fadwa Almansour, Abdulaziz Alshammari, Fahad Alqahtani) | |
| Multimodal ML Strategies for Wind Turbine Condition Monitoring in Heterogeneous IoT Data Environments (Syed Shahryar Jameel, Syed Muhammad Khaliq-ur-Rahman Raazi, Syed Muslim Jameel) | |
| Creating Synthetic Test Data by Generative Adversarial Networks (GANs) for Mobile Health (mHealth) Applications (Nadeem Ahmad, Irum Feroz, Faizan Ahmad) | |
| Pashto Language Handwritten Numeral Classification Using Convolutional Neural Networks (Muhammad Ahmad Khan, Faizan Ahmad, Khalil Khan, Maqbool Khan) | |
| IoT-Driven Smart Housing: Strengthening Housing Society Automation Through Secure and Futuristic Networks (Muhammad Jawad, Shagufta Iftikhar, Rifaqat Alam Khan, Muhammad Taseer Suleman, Tariq Umer, Momina Shaheen) | |
| Detection of Cutting Tool Breakages in CNC Machining Centers Using Image Processing Method (Emre Zengin, Gökalp Tulum) | |
| AIoT-Based Automated Traffic Management for Smart City Solution using Computer Vision and YOLO D-NET: Advancing in Urban Mobility in Dhaka (Md Ashraful Islam, Amirul Islam, Abdulla Al Mamun) | |
| Break | 13:00 – 1400 |

Conference Agenda for Virtual Presentations: Monday, January 29, 2024

(The timing information is based on Turkish Standard Time: GMT/UTC + 3)

| Session – III (Session Chair: Buket İşler) | 14:00 – 15:30 |
|--|---------------|
| A Comprehensive Analysis of AI's Impact on Advertising Strategies (Ioana-Cristiana Frasina, Jawad Rasheed) | |
| IoT Data Privacy and Security Based on Blockchain Technology (Mohammed Talib Raheem, Isa Avci) | |
| Finding the Flies in the Sky using Advanced Deep Learning Algorithms (Mustafa Tokat, Sumeyra Bedir, and Jawad Rasheed) | |
| A Cybersecurity Procedure to Vulnerabilities Classification of Windows OS Based on Feature Selection and Machine Learning (Noor Alhuda Abdul Hasan Al-Sarray, Sait Demir) | |
| Modeling and Simulation of a Hybrid Electrical Grid for Reliability and Power Quality Enhancement (Yahya M. Mohammed, Osman Nuri UÇAN) | |
| Sentiment Analysis on Reviews of Amazon Products using Different Machine Learning Algorithms (Merve Esra Taşçı, Jawad Rasheed, Tarık Özkul) | |
| Detection of Printing Errors in 3D Printers Using Artificial Intelligence and Image Processing Methods Harun Baydoğan | |
| Sales Prediction in E-Commerce Platforms Using Machine Learning (Mohammed Aljbour, İsa Avci) | |
| Improving Video Interaction for Impaired People Using CNN (Taha Ali, Jawad Rasheed) | |
| Session – IV (Session Chair: Fatih Şahin) | 15:30 – 17:00 |
| Lane Segmentation and Turn Prediction Using CNN and SVM Approach (Sarah Kadhim Hwaidi Al-Fadhli, Timur İnan) | |
| A Survey of Machine Learning Assistance in Seismic Interpretation (Mohammed Abdullah Ali, Zaid Kamoona) | |
| A Web-based Disease Prediction System using Machine Learning Algorithms and PCA (Anushey Khan, İlham Huseyinov) | |
| Personal Rights and Intellectual Properties in the Upcoming Era: The Rise of Deepfake Technologies (Anesa Hasani, Jawad Rasheed, Shtwai Alsubai) | |
| Disease Detection and Control in Field Crops with UAV and Image Processing Techniques Suleyman Kucukbasol | |
| Enhancing Facial Recognition Accuracy and Efficiency Through Integrated CNN, PCA, and SVM Techniques (Hawraa Jaafar Murad Kashkool, Hameed Mutlag Farhan, Raghda Awad Shaban Naseri, Sefer Kurnaz) | |
| Real-Time Live Insult Analysis on Twitter-X Social Media Platform (Fatih Şahin) | |
| Evaluation of No-load Losses in the Single-sheet, Double-sheet, and Triple-sheet Step Lap Joints of the Transformer Core (Kamran Dawood, İsmet Kaymaz) | |
| Exploring the Impact of CLAHE Processing on Disease Classes Effusion, Infiltration, Atelectasis, and Mass in the NIH Chest XRay Dataset using VGG16 and ResNet50 Architectures (Emre Cirik, Onur Osman, Vedat Esen) | |
| Real Estate Price Prediction with Machine Learning (Daniel-Mihai Miricel, Jawad Rasheed, Amani Yahyaoui) | |
| Day 1 – Closing Remarks | 17:00 |

- **Day 1 – conference meeting link:** <https://meet.google.com/iry-ynhs-tct>
- For queries, please contact Dr. Jawad Rasheed at jawad.rasheed@izu.edu.tr

Organizers

Publisher



Conference Agenda for Virtual Presentations: Tuesday, January 30, 2024

(The timing information is based on Turkish Standard Time: GMT/UTC + 3)

| Session – V (Session Chair: Reşat Buğra Erkartal) | 09:00 – 10:45 |
|--|---------------|
| Deep Convolutional Neural Network (DCNN) for the Identification of Striping in Images of Blood Cells (Saadaldeen Rashid Ahmed, Brwa Abdulrahman Abubaker, Mahdi Fadih Khaleel, Abadal-Salam T. Hussain, Faris Hassan Taha, Mohammed, Mohammed Fadhil) | |
| Securing Cloud Computing Using Access Control Systems: A Comprehensive Review (Alaa J. Mohammed, Saja J. Kado) | |
| A Mobile Robot with an Autonomous and Custom-Designed Control System (Brwa Abdulrahman Abubaker, Jafar Razmara, Jaber Karimpour) | |
| Heart Disease Detection Using Deep Learning: A Survey (Sahar Shakir, Ali Obied) | |
| Blockchain-based Secured Estate Property Registration System. Baghdad estate registration as a case study (Tiba W. Al-dulaimy, Saad N. Alsaad) | |
| Detecting BGP Routing Anomalies Using Machine Learning: Review (Ali Hassan Muosa, A. H. Ali) | |
| A Survey of Next Words Prediction Models (Mortadha Adnan Abood, Suhad Malallah Kadhem) | |
| Design and Implementation of a Secure Framework for Biometric Identification based on a Convolutional Neural Network Technique (Tiba Najah, Thekra Abbas) | |
| Email Spam Detection By Machine Learning Approaches Review Paper (Mohammad Talib Hadi, Salwa Shakir Baawi) | |
| Performance Analysis of Classification Models for Network Anomaly Detection (Maythem S. Derweesh, Sundos A. Hameed Alazawi, Anwar H. Al-Saleh) | |
| Implementing Cyclical Learning Rates in Deep Learning Models for Data Classification (Hussein A. A. Al-Khamees, Mehdi Ebady Manaa, Nabaa Ali Khalil, Zahraa Hazim Obaid) | |
| Session – VI (Session Chair: Tolga Kudret Karaca) | 10:45 – 12:30 |
| Exploiting Crow Search Algorithm to Overcome Bandpass Problem (Ali M. Ahmed Al-Sabaawi, Mohsin Hasan Hussein, Al Gburi Hussien Qahtan, Hayder Abdulameer Marhoon) | |
| State-of-the-Art FNIRS for Clinical Scenarios: A Brief Review (Samandari Ali Mirdan, Afonin Andrey Nikolaevich) | |
| Fingerprint Recognition Revolutionized: Harnessing the Power of Deep Convolutional Neural Networks (Sajidah Jaber Habib, Abdul-Wahab Sami Ibrahim) | |
| Human Activity Recognition using Convolutional Neural Networks (Omer Fawzi Awad, Saadaldeen Rashid Ahmed, Atheel Sabih Shaker, Duaa A. Majeed, Abadal-Salam T. Hussain, Taha A. Taha) | |
| An Evolutionary Deep Learning for Respiratory Sounds Analysis: A survey (Zainab H. Albakaa, Alaa Taima Alb-Salih) | |
| Drone Detection and Recognition Using Visual Range Based on Deep Convolutional Neural Network (Khuder Hasan Kamil, Anwar Hassan Al-Saleh) | |
| Robot Hand-Controlled by Gyroscope Sensor by Using Arduino (Fatima ghali, Atheer Y. Oudah) | |
| Deep Learning Technique for Gymnastics Movements Evaluation Based on Pose Estimation (Khalil I. Alsaif , Ahmed S. Abdullah) | |
| Instant High Starting Current Protection System for Induction Motor Based Reducing the Starting Speed (Saadaldeen Rashid Ahmed, Mohammed Fadhil, Ravi Sekhar, Abadal-Salam T. Hussain, Nilisha Itankar, Jamal Fadhil Tawfeq, Haider Kh. Easa, Taha A. Taha, Shouket A. Ahmed) | |
| Optimizing Solar Energy Harvesting: A Comprehensive Study on Photovoltaic Tracking Systems and their Impact on Renewable Energy Efficiency (Saadaldeen Rashid Ahmed, Abadal-Salam T. Hussain, Jamal Fadhil Tawfeq, Sazan Kamal Sulaiman, Ravi Sekhar, Nitin Solke, Haider Kh. Easa, Taha A. Taha, Omer K Ahmed) | |
| Break | 12:30 – 13:30 |

Conference Agenda for Virtual Presentations: Tuesday, January 30, 2024

(The timing information is based on Turkish Standard Time: GMT/UTC + 3)

| Session – VII (Session Chair: Bahar Yalçın) | 13:30 – 15:30 |
|--|---------------|
| Optimizing Solar Energy Efficiency through Automatic Solar Tracking Systems (Saadaldeen Rashid Ahmed, Pritesh Shah, Mohammed Fadhil, Abadal-Salam T. Hussain, Sushma Parihar, Jamal Fadhil Tawfeq, Taha A. Taha, Faris Hassan Taha, Omer K Ahmed, Hazry Desa, Khawla A. Taha) | |
| Comparison of Secondary Gamma-ray Measurements from Interacted Neutrons with Ordinary and Enhanced Paraffin with Boron and Tungsten Nanoparticles using Different Portable Detection Devices (Ahmed Ghanim Muslim, Asia H. Al-Mashhadani) | |
| Selective Harmonic Elimination in Multilevel Inverters Using the Bonobo Optimization Algorithm (BOA) (Taha A. Taha, Noor Izzri Abdul Wahab, Hussein I. Zaynal, Mohd Khair Hassan, Yousif Sufyan Jghef) | |
| Secure and Efficient Classification of Trusted and Untrusted Nodes in Wireless Body Area Networks: A Survey of Techniques and Applications (Israa Ibraheem Al_Barazanchi, Wahidah Hashim, Reema Ahmed Abdalla Thabit, Ravi Sekhar, Pritesh Shah, Harshavardhan Reddy Penubadi) | |
| Secure Trust Node Acquisition and Access Control for Privacy-Preserving Expertise Trust in WBAN Networks (Israa Ibraheem Al_Barazanchi, Wahidah Hashim, Reema Ahmed Abdalla Thabit, Ravi Sekhar, Pritesh Shah, Harshavardhan Reddy Penubadi) | |
| Developing A Hybrid Pseudo-Random Number Generator for Multi Secrecy Purpose (Saja J. Mohammed) | |
| Solar Street Lighting Revolution: A Sustainable Approach Enabled by AIoT and Smart Systems (Saadaldeen Rashid Ahmed, Taha A. Taha, Sulaiman M. KARIM, Pritesh Shah, Abadal-Salam T. Hussain, Nilisha Itankar, Jamal Fadhil Tawfeq, Omer K Ahmed) | |
| Integrating AIoT and Machine Learning for Enhanced Transformer Overload Power Protection in Sustainable Power Systems (Saadaldeen Rashid Ahmed, Taha A. Taha, Rawshan Nuree Othman, Abadal-Salam T. Hussain, Jamal Fadhil Tawfeq, Ravi Sekhar, Sushma Shah, Maha Mohammed Attieya) | |
| Integrating AIoT for Enhanced Monitoring and Optimization of Transmission Lines Earthing System (Saadaldeen Rashid Ahmed, Abadal-Salam T. Hussain, Mohammed Fadhil, Sazan Kamal Sulaiman, Pritesh Shah, Nilisha Itankar, Jamal Fadhil Tawfeq, Taha A. Taha, Alaa. A. Yass) | |
| Machine Learning-Driven Three-Phase Current Relay Protection System for Small Transient Periods in Sustainable Power Systems (Saadaldeen Rashid Ahmed, Abadal-Salam T. Hussain, Pritesh Shah, Sazan Kamal Sulaiman, Nilisha Itankar, Taha A. Taha, Omer K Ahmed) | |
| Machine Learning for Sustainable Power Systems: AIoT-Optimized Smart-Grid Inverter Systems with Solar Photovoltaics (Saadaldeen Rashid Ahmed, Abadal-Salam T. Hussain, Duaa A. Majeed, Jamal Fadhil Tawfeq, Taha A. Taha, Pritesh Shah, Harshavardhan Reddy Penubadi, Omer K Ahmed) | |
| Prediction of Sexually Transmitted Diseases using Deep Convolutional Neural Networks for Image Data (Ans Ibrahim Mahameed) | |
| Closing Remarks | 15:30 |

- **Day 2 – conference meeting link:** <https://meet.google.com/hxf-dntg-xib>
- For queries, please contact Dr. Jawad Rasheed at jawad.rasheed@izu.edu.tr

Organizers



Publisher



Presentation Guidelines

Please follow the below guidelines for preparing the presentation.

1. **Authors are free to use any template** for preparing the presentation slides. However, it is strongly advised to prepare slides in accordance to help visually impaired people.
2. Presentation **duration** should be between **10-12 minutes**.
3. There will be a short question and answer session after each presentation.
4. One of the authors must attend and present in the virtual (online) session at the allocated time and date of their presentation.
5. **Authors of the registered papers, who are unable to do live presentations in virtual (online) sessions due to unavoidable circumstances, must share a recorded presentation by following the below steps.**
 - The recorded **video should include the presentation slides as well as the face of the presenter**.
 - The video **duration** should be between **10-12 minutes**.
 - Make sure the **voice in the recording is clear** and loud.
 - Acceptable file formats are **mpg, mp4, or webm**.
 - Recommended resolution and aspect ratios: **720p: 1280x720**.
 - It is recommended to **upload it to your Google Drive and share the link** by sending an email to jawad.rasheed@izu.edu.tr and gokalptulum@topkapi.edu.tr
 - The **email title** should be **FONES-PIDXX PRESENTATION**. Replace 'XX' with your paper id.
 - Make sure the **link is publicly accessible** until the conference ends.
 - **The deadline to submit a recorded video is January 27, 2024.**