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ASYU 2026 · DETAILED CONFERENCE PROGRAM

Day 1 · Wednesday, September 9, 2026

08:00–08:45

Registration

08:45–09:30

Opening Ceremony Chair: TBA

09:30–10:30

Keynote #1 Speaker: Dr. Mustafa Dayioğlu

Parallel Session 1

10:30–12:00

1 Computer Vision & Pattern Recognition

AB1-407

6 papers

295

Compression Sensitivity of Metastatic Regions in Whole Slide Images: A Comparative Study of JPEG, JPEG2000, and Autoencoder-Based Codecs

Emin Ertan (Kayseri University)*; Abdulkadir Gülşen (Kayseri University)

304

Enhancing 4D Radar-Based 3D Object Detection through Pedestrian-Focused Improvements

Muhammet Bingöl (İstanbul University-Cerrahpasa)*; Zeynep Orman (İstanbul University-Cerrahpasa)

314

Multi-Class Object Detection for Visually Impaired Assistance Using Deep Learning

Havva Erdoğan (İstanbul Kültür University); Lara Yıldırım (İstanbul Kültür University); Bora Soybay (İstanbul Kültür University); Necip Kasapoglu (İstanbul Kültür University)*

321

A Smart Market System Using Computer Vision and Embedded Sensor Fusion

Berkay Nak (Marmara University)*; Zeki Demir (Marmara University); Yunus Dursun (Marmara University)

325

Detection and Classification of Aerial Objects Under Multimodal, Multi Resolution and Small Object Conditions

Yalın Baştanlar (İzmir Institute of Technology); Hüseyin Uysal (İzmir Institute of Technology)*; Ahmet Kurt (İzmir Institute of Technology); İlaha Karimli (İzmir Institute of Technology); Melik Fırat Menekşe (İzmir Institute of Technology)

343

Deep Learning Based Lung Cancer Detection and T-Stage Prediction

Emir MÜDERRİSOĞLU (Biruni University); Sena ŞEREFOĞLU (Biruni University)*

19

Leveraging Medical Foundation Models for Retinal OCT Pathology Classification

Ceren Akgün (Neuronauts AI); Cihat Emre Karataş (Neuronauts AI); Ahmet Yasir Duman (Neuronauts AI); Ali Gunes (İstanbul Atlas Üniversitesi)*

388

A Multi-Agent Conversational Assistant for Video Streaming Services

Hamza Gözükara (Mindsane Ltd Co); Beyza Nur Ulu (Mindsane Ltd Co); Ali Umut Çiğdem (Mindsane Ltd Co); Erkan Kara (D-Smart Inc); Ozan Köseoğlu (D-Smart Inc.); Semen Son-Turan (MEF University); Yassine Drias (MEF University); Tuna Çakar (MEF University)*

49

Cross-Attention Based Hybrid CNN-ViT Architecture for Tomato Leaf Disease Classification

Hasan Eskin (Mehmet Akif Ersoy University)*; Serkan Ballı (Mehmet Akif Ersoy University)

53

A Reproducible Benchmark of U-Net Variants for Multimodal Brain Tumour Segmentation on BraTS 2020: Comparative Evaluation and Modality Ablation

Louis Obadiha (İstanbul Okan University)*; Ndachimya Magaji Edward (İstanbul Okan university); Nibras Mohammad Abubakar (İstanbul Okan university); Daniel Godwin (İstanbul Okan university); Nyibong George (İstanbul Okan university); Jibrailu Daniel (İstanbul Okan university)

59

Hybrid CNN–Machine Learning Approach for Pistachio Classification Using Deep Features

Hakan Aktaş (Niğde Ömer Halisdemir University)*; Erdem Onur Özyurt (Turkish-German University)

81

Automated Assessment of Software Coding Exams

Müjgan Selen Karakaş (Özyeğin Üniversitesi); Nermin Tunçbilek (Özyeğin Üniversitesi); Ayşe Nur (İstanbul Sağlık ve Teknoloji Üniversitesi)*; Olcay Taner Yıldız (Özyeğin Üniversitesi)

296

Lead-Time-Oriented Early Warning Analysis for Navigation Health Monitoring in Autonomous Mobile Robots: An Ablation Study

Ece Ertaş (İzmir University of Economics)*; Pınar Oğuz Ekim (İzmir University of Economics)

299

Maneuver-Dependent MPC Horizon Analysis for Overactuated AUV Trajectory Tracking

Beste Ercüment (İstanbul Technical University)*; Volkan Sezer (İstanbul Technical University)

319

RescueLink: AI and Sensor Fusion Driven Ecosystem for Residential Safety and LoRa-Based Post-Disaster Communication

Burak Çam (İstanbul Kültür University); Kerem Arkaç (İstanbul Kültür University); Cem Albal (İstanbul Kültür University); Wisam Elmasry (İstanbul Kültür University)*

342

Comparative Evaluation of LiDAR, RGB-D, and Fused 3D Map Quality for Indoor Mobile Robots

Furkan Hayırlıoğlu (İstanbul Technical University)*; Volkan Sezer (İstanbul Technical University)

344

Extension of Negotiation-Based Multi-Agent Path Finding Approach for Dynamic Moving Obstacles

Amin Deldari Alamdari (Özyeğin University)*; Dilay Dal (Özyeğin University); Halenur Arpacık (Özyeğin University); Nazlı Çiçek Özbek (Özyeğin University); Mert Korkmaz (Özyeğin University); Reyhan Aydoğan (Özyeğin University)

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Gaussian Process-based Autonomous Wi-Fi Mapping

Samet Özabacı (İstanbul Medeniyet Üniversitesi)*; Burak Rüstemoğulları (Saha Robotik Laboratuvarı); Elif Aykırı (İstanbul Medeniyet Üniversitesi); Haluk Bayram (İstanbul Medeniyet Üniversitesi)

- 201 **A Comparative Benchmark for Structured Legal Reference Extraction from Turkish Tax Rulings**
Ahmet Dincoguz (TED UNIVERSITY)*; Murat Karakaya (TED UNIVERSITY); Hakan Emekçi (TED UNIVERSITY); Zeynep Bakanoğulları (TED UNIVERSITY); Erdem Atak (TED UNIVERSITY)
- 161 **A Two-Layer Evaluation of Speech-to-Text and LLM-Based Terminology Extraction Systems for Multilingual Education**
Doga Cakil Yilmaz (Koc University); Berat Enes Dadak (Tatilsepeti ArGe); Efe Batur Giritli (Tatilsepeti ArGe); Yekta Can (Tatilsepeti)*
- 172 **Character Portrayal Analysis via Story Graphs: An Ontology-Based Framework**
Furkan Akkurt (Boğaziçi University)*; Susan Michele Üsküdarlı (Boğaziçi University)
- 294 **Creating a Turkish Clinical Corpus: Translation Process and Quality Evaluation of the i2b2-2010/VA Dataset**
Oylum Alatlı (Ege University Dept. of Computer Eng.)*; Şebnem Bora (Ege University Dept. of Computer Eng.); Çağan Kaplan (Ege University Faculty of Medicine); Begüm Tahhan (Ege University Faculty of Medicine); Sıla Özkal (Ege University Faculty of Medicine); Yıldırım Adaloğlu (Ege University Faculty of Medicine); Aidana Aidynkyzy (Astana IT University Dept. Computer Eng.); Adem Altungeyik (Ege University Dept. of Computer Eng.); İ. Raika Durusoy (Ege University Faculty of Medicine); Esin Ergönül (Dokuz Eylül University Faculty of Medicine); Oğuz Dikenelli (Ege University Dept. of Computer Eng.)
- 318 **EAR: Entity-Aware Partitioning Approach for RAG Development**
Cenab Batu Bora (Georgia Institute of Technology); Oylum Alatlı (Ege University Dept. of Computer Eng.)*; Sebnem Bora (Ege University Dept. of Computer Eng.); Oğuz Dikenelli (Ege University Dept. of Computer Eng.)
- 167 **Earthquake Damage Assessment and Determination of Assistance Needs via Social Media Channels**
Ata Dagidir (Özyeğin University)*; Kutay Mumcu (Özyeğin University); Kerem Kaya (Özyeğin University); Olcay Yıldız (Özyeğin University)

- 283 **Post Disaster Assembly Area Adequacy and Urban Heat Island Analysis: A Data Driven Evaluation of Izmir**
Cenker Efe Tahan (Izmir University of Economics)*; Ege Sevindi (Izmir University of Economics); Osman Serhan Aydoğan (Izmir University of Economics); Alper Demir (Izmir University of Economics)
- 127 **A CPI-Weighted Web-Based Price Index for Monitoring Inflation and Cost of Living in Türkiye**
Uraz GÜNEŞ (Istanbul 29 Mayıs University)*; Onur Demirtaş (Ozyegin University); Efe Yıldırım (Ozyegin University); Ata Çıldıas (Ozyegin University); Batu Masak (Ozyegin University); Batu Önlükuş (Ozyegin University); Arhan Er (Ozyegin University); Doruk Gülen (Ozyegin University); Can Çetin (Ozyegin University); Batuhan Pehlivan (Ozyegin University); Elif Tural (Ozyegin University); Aleksandra Kolmogorova (Ozyegin University); Sinem Örenli (Ozyegin University); Eren Güngör (Ozyegin University); Dilara Uğraşkan (Mihrimahsultan Tıp Merkezi); Olcay Yıldız (Ozyegin University)
- 247 **Dikkat Tabanlı Evrimsel Sinir Ağları ile Türkçe El Yazısında El Kullanımı Tahmini**
Yunus Emre Yalçın (Yalova University)*; Burcu Demirelli Okkalioglu (Yalova University)
- 138 **Implicit Session Reconstruction and Co-Visitation Graph Analysis in Large-Scale Listing Clickstreams**
Emirhan Karatepe (Emlakjet); Melih Sözdinler (Emlakjet)*; Yalçın Doksanbir (Emlakjet); Gökhan Akpınar (Emlakjet); Ege Aktan (Emlakjet); Ali Hakan Işık (Burdur Mehmet Akif Ersoy University)
- 152 **YT-Rex: A Modular Receipt Information Extraction Workflow with a Small Learnt Ranker on Spatial Features**
Muhammed Adıyaman (Istanbul Technical University)*; Mehmet Keskinöz (Istanbul Technical University)
- 139 **Visualizing User Behavior on Real-Estate Platforms: A Case Study in Sessionization, Spatial Aggregation, and Self-Organizing Edge Bundling**
Emirhan Karatepe (Emlakjet); Melih Sözdinler (Emlakjet)*; Yalçın Doksanbir (Emlakjet); Ege Aktan (Emlakjet); Gökhan Akpınar (Emlakjet); Ali Hakan Işık (Burdur Mehmet Akif Ersoy University)

12:00–13:30

Lunch

13:30–14:30

Keynote #2

Speaker: Dr. Evgeny Kharlamov

Parallel Session 2

14:30–15:45

6 Computer Vision & Pattern Recognition

AB1-407

5 papers

- 52 **Surface Crack Classification for Autonomous Vehicles: Quantifying the Auto-Labeling Ceiling through Manual Validation**
Can Aytekin (İstanbul Teknik Üniversitesi)*; Ahmet alkan (İstanbul Teknik Üniversitesi)
- 369 **CHORD: Comparing HMM and Constant-Q Representation for Decoding Harmony**
Hale Türeli (Kadıköy Alev Alatlı Bilsen)*
- 176 **Comparative Analysis of Deep Learning Architectures for Age and Gender Estimation from Gait Images**
Esengül TURAN (Kocaeli University); Zeynep DURAK (Kocaeli University); Pınar GÜNER ŞAHAN (Kocaeli University)*; Suhap ŞAHİN (Kocaeli University)
- 17 **Computing Complexity in Image Datasets for Big Data Analytics**
Çiğdem Çoban (Gaziantep İslam Bilim ve Teknoloji Üniversitesi)*; Öskan Barutçuoğlu (Harran Üniversitesi); Hamza Erol (Mersin Üniversitesi)
- 123 **Dikey Eksenli Stereo Derinlik Kamerası Görüntüleri ile Ağ Destekli Yüz Derinliği Tamamlama ve Nokta Bulutu Üretimi**
Öner Acet (Gebze Technical University)*; Habil Kalkan (Gebze Technical University)

7 ML & Deep Learning

AB1-408

5 papers

- 131 **A Fairness-Aware Cross-Dataset Benchmark for Skin Disease Classification Under Domain Shift**
Caleb Morrison (İstanbul Okan University)*; Vimipwa Augustine (İstanbul Okan University)
- 157 **Bidirectional Cross-Modal Attention for Multimodal Disease Prediction: Fusing Clinical Narratives with Vital Signs**
Syed Basit (OKAN University)*
- 308 **Common-Loss Parameter-Efficiency Analysis of MLP and KAN Neural Receivers for Digital Communications**
Sude Ertan (Ankara Yıldırım Beyazıt University)*; Osman Tokluoglu (Ankara Yıldırım Beyazıt University); Enver Cavus (Ankara Yıldırım Beyazıt University)
- 356 **Confidence-Aware Brain Tumor Classification Using Monte Carlo Dropout on MRI Images**
NIBRAS ABUBAKAR (İstanbul Okan University)*; UMAR MUSTAPHA LAWAN (İstanbul Okan University); YA'UBA HALIDU (İstanbul Okan University); CHAHYAANDIDA ISHAYA (İstanbul Okan University); AMNA ANWAR (İstanbul Okan University); AHMED SADIQ ABUBAKAR (İstinye University)
- 184 **EKG Sinyallerinden Kardiyovasküler Hastalık Tanısı için Hafif Bir Derin Öğrenme Modeli**
Sümeyye Sevim (İstanbul Ticaret)*; Sevcin Kahraman (İstanbul Ticaret Üniversitesi)

8 Bioinformatics, Health & Biomedical

AB1-409

5 papers

- 352 **Biologically Informed Channel-Interaction RegNet for Cancer Classification in Single-Cell Fluorescence Microscopy Images**
Nurmıray Kalkan (Ankara Yıldırım Beyazıt University); Ecenur Cevik (Ankara Yıldırım Beyazıt University)*; Ali Degırmenci (Ankara Yıldırım Beyazıt University)
- 300 **FEDBIOJEPA: A Self-Supervised Federated Knowledge Graph Framework for Computational Drug Repositioning**
Yusuf Aktas (Abdullah Gul University); Gokhan Bakal (Abdullah Gul University)*
- 76 **Fonksiyonel Bağlantısallık Özellikleri ve Makine Öğrenmesi Kullanılarak fMRI Verilerinden Hipnotik Durumun Sınıflandırılması**
Buse Tuna (Defne telekomünikasyon); Ayşe Gül Eker (Kocaeli University)*
- 197 **Machine Learning-Based Heart Failure Mortality Prediction: A Comparative Analysis of Standalone and Stacked Ensemble Models**
Beyzanur Akdoğan (Istanbul Technical University)*
- 205 **SafeStep: A Hybrid Deep Learning-Based Fall Detection and Mobile Emergency Notification System**
Ayşe Gizem Coşkun (Erciyes University); Kadir Yoldaş (Erciyes University); Enes Şimşek (Erciyes University); Fatma Azizoğlu (Erciyes University); Gökhan Azizoğlu (Erciyes University)*; Ahmet Nusret Toprak (Erciyes University)

9 NLP & Language Tech

AB1-509

5 papers

- 13 **Evaluating Spelling-Checking Algorithms for NLP in Technical Texts**
Ahmet Toprak (Mısyon Financial Technologies Inc.)*; Metin Turan (Istanbul Ticaret Üniversitesi)
- 244 **Improving Reasoning Performance in Turkish- Focused Small Language Models Through CoT- Based Fine-Tuning: The Case of KUMRU-2B**
İlkay ONAY (ISUBU)*; Kıyas KAYAALP (ISUBU); Abdurrahman GÜMÜŞ (ISUBU)
- 174 **Informative or Not? Automatic Classification of Book Reviews**
Ezgi Kıran (Eskisehir Technical University)*; Zeliha Ergül Aydın (Eskisehir Technical University)
- 136 **Kurumsal Değişiklik Kayıtlarının Doğal Dil İşleme ile Analizi: TF-IDF ve Transformer Tabanlı Bir Yaklaşım**
Mehmet Kutlugün (Turkish Technology)*
- 75 **Media's Impact on Inflation Views: An Empirical Approach**
Ceren Öz (Özyeğin University)*; Selva Demiralp (Koç University); Orkun Saka (London School of Economics and Political Science); Olcay Taner Yıldız (Özyeğin University)

10 Energy, Smart Grids & Cities

AB1-510

5 papers

- 57 **A Large-Scale Benchmark for Unsupervised Anomaly Detection in Database Query Logs**
Said Yalçın (SUBU); Muhammed Öz (SUBU)*
- 154 **Distributed Multi-Agent Control for BESS-Integrated Low-Voltage Microgrids under Severe Faults**
Oğuzhan Çiftçi (MARMARA UNIVERSITY)*
- 323 **An Adaptive SDR-Based Receiver with Decision-Directed Kalman Channel Tracking for 1x2 MRC Systems**
Sertan Başarıcı (Marmara Üniversitesi)*; Alihan Kocaakman (Marmara Üniversitesi); Engin Maşazade (Marmara Üniversitesi)
- 120 **From Feature Specifications to Service-Oriented Vehicle Architecture: A Model-Based Approach Towards SDV**
Ecem Kursun (AVL Türkiye Research and Engineering); Saadet Bahar (AVL Türkiye Research and Engineering)*; Aziz Gundogdu (AVL Türkiye Research and Engineering); Busra Soydan (AVL Türkiye Research and Engineering)
- 230 **Post-Layout SEU/SEMU Evaluation of a LEAP-Oriented DICE Latch in 180 nm CMOS at 100 MHz**
Mustafa Yıldırım (Ankara Yıldırım Beyazıt University)*; Osman Tokluoglu (Ankara Yıldırım Beyazıt University)

15:45–16:15

Coffee Break

11 SPECIAL: Chaotic Systems

AB1-407

4 papers

375 **AgriSynth: Tarımda Derin Öğrenme Tabanlı Hastalık Teşhisi ve Büyük Dil Modeli Entegrasyonlu Karar Destek Sistemi**

sibel birtane akar (istanbul arel university)*; Pourya Taghizadeh (İstanbul Arel Üniversitesi); Pouya Taghizadeh (İstanbul Arel Üniversitesi)

38 **From Immersion to Intention: How Narrative Transportation Drives Travel Motivation in Virtual Food Tourism**

Kathrin Jaszus (Heilbronn University of Applied Sciences); Roozbeh Babolian Hendijani (Bina Nusantara University)*

360 **The Limitations of SMOTE and Class Imbalance in Low-Sample Radiomics: A Cautionary Case Study in Renal Mass Differentiation**

Kenan FIRAT (Boğaziçi University)*; Albert Güveniş (Boğaziçi University)

60 **Ensuring Integrity in the Digital Classroom: A Private Blockchain Approach to Smart Attendance System Using Deep Learning for Face Detection**

Yusuf Bello (Istanbul Okan University)*; Ibrahim Dasuki Mahmood (Istanbul Okan University); Zidon Musa (Istanbul Okan University); Suleiman Wilson (Istanbul Okan University)

12 ML & Deep Learning

AB1-408

5 papers

391 **Hardware-Cost-Aware Total-Variation-to-Bit Mapping for Image Super-Resolution**

Serdar Duran (ASYU2026)*; Ece Olcay Güneş (İTÜ Elektrik-Elektronik Fakültesi)

155 **Phys2S-GNN: A Physics-Informed Dynamic Graph Neural Network for Compound Extreme Weather Event Prediction at Sub-Seasonal Timescales**

Syed Basit (OKAN University)*; Ahmed Anas (OKAN university)

150 **Piyango Bileti Minimumlarının Geometrik Bağlanabilirliği: Budanmış Ağlarda Bezier Eğrileriyle Mode Connectivity Analizi**

Ahmet Fatih YILDIZ (Yıldız Technical University)*; Mehmet Fatih AMASYALI (Yıldız Technical University)

198 **Protein Family Classification Based on ProteinBERT**

Rumeysa Emine Şahin (Bursa Technical University)*

374 **ROI Supported Patient Level Decision Approach for Brain Tumor Classification**

BARIŞ AKKUŞ (Yıldız Technical University)*; Mert BAL (Yıldız Technical University)

13 Robotics, Autonomous & Embedded Systems

AB1-409

5 papers

62 **ETSI EN 300 220-2 Compliant Sub-GHz 6TiSCH: L/O-Band Implementation in Contiki-NG with Simulation and Hardware Validation**

Yavuz Haliloğlu (Mavi Alp Information Technologies)*; Gökhan Aydın (Ordinatrum Information Technologies); Nasri Djamal Ahmed (Karadeniz Technical University); Hakan Aydın (Karadeniz Technical University); Sedat Görmüş (Karadeniz Technical University)

54 **Benchmarking TCP-Based Protocols Across Varying Network Conditions for Telerobotics**

Alp Dikmen (Yeditepe University)*; Salih Mert Canseven (Yeditepe University); Tacha Serif (Yeditepe University)

242 **A Sideslip-Aware Preview Approach for MPC Vehicle Path Tracking and Comparison with Classical Methods**

Pınar Tuncer (Istanbul Technical University)*; Volkan Sezer (Istanbul Technical University)

401 **An Integrated Model-in-the-Loop Framework for Automated Valet Parking System Development and Evaluation**

Deryanur Tezcan (FEV Türkiye)*

144 **Design and Experimental Validation of a Low-Cost CoreXY-Based Automated Potting Application System for Aerospace Honeycomb Composite Structures**

Melike Erol (Karadeniz Teknik Üniversitesi)*; Eda Abdoğlu (Karadeniz Teknik Üniversitesi); Merve Erol (Karadeniz Teknik Üniversitesi); Mustafa Şinasi Ayas (Karadeniz Teknik Üniversitesi); Mahmut Tolga Karakaş (TUSAŞ – Türk Havacılık ve Uzay Sanayii A.Ş.)

14 Security & Trustworthy AI

AB1-509

5 papers

93 **An Observability-Based Decision-Support Model for Review Manipulation Governance in Social Commerce**
Peri Manaf (BINUS Business School)*

128 **Fairness-Aware Algorithmic Decision-Making in Public Resource Allocation: A Lightweight Simulation Framework**
Rukiye aslan (Fırat Üniversitesi)*; Nisanur Şen (Fırat Üniversitesi); Özgür Karaduman (fırat universitesi)

109 **Compound Refusal Bias: Decomposing Risk-Category and Linguistic-Mutation Interactions in LLM Safety Evaluation**
Buğra Uluırmak (Erciyes University)*; Rifat Kurban (Abdullah Gul University)

18 **Derin Öğrenme Tabanlı Transfer Öğrenme Yaklaşımı Kullanarak Nesnelerin İnterneti Ağlarında Saldırı Tespiti**
Nursaç Kurt (Marmara University)*; Önder Demir (Marmara University); Gözde Karataş Baydoğmuş (Biruni University)

64 **SHAP-Based Explainable XGBoost Framework for IoT-Based DDoS Detection**
Abdel-Hamid ABDELKERIM MAHAMAT (Ankara Yıldırım Beyazıt University)*; Mustafa YENİAD (Ankara Yıldırım Beyazıt University)

15 Energy, Smart Grids & Cities

AB1-510

5 papers

31 **System Identification of a Neural Network Controlled Heating, Ventilation and Air Conditioning System: A Comparative Analysis**
Baris Aykent (Işık University)*; Emir Oran (Işık University); Muhammed Yusuf Altunışık (Işık University); Kerem Şenol (Işık University)

217 **Design and Evaluation of an AI-Powered Web System for Drought Prediction**
Ahmet Eser (Selçuk Üniversitesi)*

367 **Design of an Event-Driven and Energy-Efficient Hybrid LoRa Communication Network for Rural Agricultural Areas**
Kerim Mert Çalışır (Gazi University)*; Saadin Oyucu (Gazi University); Aydın Çetin (Gazi University)

125 **PlantVillage Bitki Yaprak Hastalığı Sınıflandırması için İki Hafif Model Ailesinin Karşılaştırması: Dikkat Destekli CNN Mimarileri ve YOLO Tabanlı Sınıflandırıcılar**
Yusuf Olcay Dirik (Bursa Teknik Üniversitesi)*; Nevin Çavuşoğlu (Mudanya Üniversitesi)

241 **AFIS: A Distributed Incentive Mechanism for Frequency-Responsive Coordination in Peer-to-Peer Energy Markets**
Amir HANARİ (Yıldız Technical University)*; Mustafa BAYSAL (Yıldız Technical University); Altuğ BOZKURT (Yıldız Technical University)

17:30

End of 1st day

08:00–08:45

Registration

Parallel Session 4

08:45–10:00

16 Computer Vision & Pattern Recognition

AB1-407

5 papers

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Dört Aşamalı Derin Öğrenme ile Görüntü Manipülasyonu Tespiti ve Piksel Düzeyinde Anlamsal Analiz

Emre Çoruhlu (Marmara University)*; Samet Can Habalı (Marmara University); Merve Pınar (Marmara University); Abdulsamet Aktaş (Marmara University)

41

Low-Light Image Enhancement via Retinex and Vision Transformers

Sena Yagmur Sen (Izmir University of Economics); Mehmet Turkan (Izmir University of Economics)*; Gazihan Alankus (Izmir University of Economics)

90

Multi-Label Weakly Supervised Change Classification

İdris Demir (Yıldız Teknik Üniversitesi)*; Ali Can KARACA (Yıldız Teknik Üniversitesi)

71

OFER: Occlusion-Robust Facial Emotion Recognition via GAN-Based Inpainting and CNN Classification

Asude Sultan Cok (Izmir University of Economics); Sena Yagmur Sen (Izmir University of Economics); Mehmet Turkan (Izmir University of Economics)*

121

Pediyatrik Konjenital Vertebral Anomali Tespiti için Çok Modlu Derin Öğrenme Yaklaşımı

Zehra Bilici (Gebze Teknik Üniversitesi)*; Zöhre Okur (Sağlık Bilimleri Üniversitesi Başakşehir Çam ve Sakura Şehir Hastanesi); Nur Banu Albayrak (Kocaeli Üniversitesi); Ercan Ayaz (Sağlık Bilimleri Üniversitesi Başakşehir Çam ve Sakura Şehir Hastanesi)

17 ML & Deep Learning

AB1-408

5 papers

202

Reproducible Breast Ultrasound Lesion Segmentation: Classical Baselines and a Deep Learning Ensemble on BUSI Dataset

M. Çağatay Esen (Izmir Bakircay University); Ela Kirova (Izmir Bakircay University); Reyhan Hoşavcı (Fatih Sultan Mehmet Vakıf University); Kübra Kumrular (Izmir Bakircay University)*

317

Topology-Adaptive Graph Learning for Root Cause Localization in Military and Tactical Network Fault Diagnosis

Tugba Aras (ITU-ASELSAN)*; Mehmet Keskinöz (ITU)

336

AMC-MAS: Adaptive Memory Compression for Long-Horizon Multi-Agent LLM Systems

Naeem Khan (James Watt School of Engineering, University of Glasgow)*; Huseyin Parmaksiz (Bilecik Şeyh Edebali University); Shibli Nisar (National University of Sciences and Technology)

397

A Hybrid Multi-Horizon Forecasting Pipeline Combining Temporal Fusion Transformers and LightGBM for Weekly Retail Inventory Demand Prediction

Mert Durgun (Mindsane Ltd Co); Batuhan Ulugergerli (Mindsane Ltd Co); Emir Çetin Memiş (Mindsane Ltd Co); Özcan Ayyıldız (Eve Retails Inc.); Büşra Tosun (Eve Retails Inc.); Şirin Özlem (MEF University); Semen Son-Turan (MEF University); Yassine Drias (MEF University); Tuna Çakar (MEF University)*

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An Explainable Machine-Learning Framework for Gait-Based Classification of Increased Femoral Anteversion

Pelin Su Çakır (İstanbul Kültür University); Kerim Memiş (İstanbul Kültür University); Murat Ermiş (İstanbul Kültür University)*; Tuğçe Apaydın (İstanbul Kültür University)

163 An Explainable Deep Learning Framework for Epileptic Seizure Detection from EEG Signals with Comparative Benchmarking and Fidelity Assessment

Senanur Güre (Sakarya Uygulamalı Bilimler Üniversitesi)*; Muhammed Ali Pala (Sakarya Uygulamalı Bilimler Üniversitesi)

334 Cardiac MRI Segmentation Using Hybrid Two-Layer Ensemble and Uncertainty Mapping

Ali Abualsuood (Istanbul Kültür University); Sara Bouzou (Istanbul Kültür University); Omar Habib (Istanbul Kültür University); Wisam Elmasry (Istanbul Kültür University)*

395 Comparative Study of Particle Swarm Optimization Variants for Optimizing Antenna Feeding Parameters in Microwave Hyperthermia Treatment

Melis Bayındır (Istanbul Technical University)*; Cemanur Aydınalp (Istanbul Technical University); Gülşah Yıldız (Istanbul Technical University); Muhammed İsmail Pençe (Istanbul Technical University)

151 Human Perceptron-Inspired TILs Assessment: Gestalt-Aware Post-Processing for Histopathology Images

Emir Meşe (Istanbul Technical University)*; Abdulkerim Çapar (Istanbul Technical University)

135 Renal Hücreli Karsinomun Otomatik Derece Sınıflandırması için Derin Öğrenme Ağı

Süeda Kaya (Istanbul Teknik Üniversitesi)*; Süeda Kaya (Üsküdar Üniversitesi); Mürvet Kırıcı (Istanbul Teknik Üniversitesi)

6 NLP-Driven Discovery of Latent Failure Modes in Aviation Maintenance

Şeyma Göçmez (Abdullah Gul University); Gokhan Bakal (Abdullah Gul University)*

337 Nafie: A Lightweight Turkish Causal Language Model

Halis Ebrar Cengiz (Hacettepe University)*; Ufuk Ağaya (Hacettepe University); Bedirhan Gençaslan (Hacettepe University)

237 Reducing Hallucination in Turkish Tax-Ruling Question Answering: Agentic versus Vanilla RAG at Two Model Scales

erdem atak (TED University)*; Kasım Murat Karakaya (TED University); Hakan Emekçi (TED University); Zeynep Bakanoğulları (TED University); Ahmet Baran Dinçoğuz (TED University)

224 SCOPE: Source-Conditioned Pooling for Embedding-Level Semantic Fidelity Estimation

Teoman Berkay Ayaz (R&D Center of Next4biz); Fatma Patlar Akbulut (Istanbul Kültür University); Akhan Akbulut (Istanbul Kültür University)*

269 Towards LLM-Driven Construction of a General-Purpose Turkish Knowledge Graph

Muhammed Salih Dede (MEF University); Deniz Ersin Aslan (MEF University); Fatih Okur (MEF University); Ömer Faruk Balaban (MEF University); Babil Gençalp Turan (MEF University); Şeniz Demir (MEF University)*

272 A Scenario-Based Framework for LiDAR Placement Optimization in Autonomous Valet Parking

Burak Kaleci (TOFAŞ Türk Otomobil Fabrikası A.Ş.); SEMİH KANSU (TOFAŞ Türk Otomobil Fabrikası A.Ş.)*; İlknur Senem Çayıroğlu (TOFAŞ Türk Otomobil Fabrikası A.Ş.); Volkan Sezer (İstanbul Teknik Üniversitesi)

141 Design and Evaluation of an Edge-Cloud-Based Adaptive Traffic Signal Control Framework

Seyran Cıraplı (Firat University)*; Nisa Avcı (Firat University); Özgür Karaduman (Firat University)

265 IEEE 802.15.7 Tabanlı Araçlar Arası Görünür Işık Haberleşmesi Ağları İçin Uç Bilişim Destekli Actor-Critic EDCA: Parçalı-Durağan Markov Yaklaşımı

OSMAN TOKER (HAVELSAN A.S.)*; Ufuk Tureli (Yıldız Technical University)

67 Real Time Parking Occupancy Detection from Closed Network CCTV Video via Homography Aided Multi Point Slot Matching

Mustafa SAYIN (TOBB ETU)*; Tolga İnan (TOBB ETU)

21 Computer Vision & Pattern Recognition

AB1-407

6 papers

- 261 **RGB-Skeleton Fusion Based Human Action Recognition and Preliminary Analysis of Vision-Language Model Effects**
Ennur Mollaömeroğlu (Karadeniz Teknik Üniversitesi)*; Cemal Köse (Karadeniz Teknik Üniversitesi); Sait Alp (Trabzon University CVLR Lab)
- 293 **Small Object Detection with Integrated Deep Learning Models**
ALI A. H. KHATIB (Bahcesehir University); MD IMRAN HOSEN (Bahcesehir University)*; Muhammad Ammar Ali (Istanbul Arel University); Tarkan Aydin (Bahcesehir University)
- 347 **Video-Based Modern Status Detection under Uncontrolled Conditions**
Ümran Meryem Karabakal (İstanbul Medeniyet Üniversitesi); Samet Özabacı (İstanbul Medeniyet Üniversitesi)*; Zeynep Baysal (İstanbul Medeniyet Üniversitesi); Metehan Kara (İstanbul Medeniyet Üniversitesi); Muhammed Taha Tizi (İstanbul Medeniyet Üniversitesi); Haluk Bayram (İstanbul Medeniyet Üniversitesi)
- 402 **Weakly Supervised Semantic Segmentation with Segment Anything Model for Remote Sensing Images**
M. Taha Gökcan (Yıldız Technical University)*; Gökhan Bilgin (Yıldız Technical University); Songül Varlı (Yıldız Technical University)
- 170 **Weather Image Classification Using EfficientNetV2-S: A Multi-Stage Fine-Tuning and Ensemble Approach**
Ege KARAKAŞ (İstanbul Ticaret Üniversitesi)*; Efe UYSAL (İstanbul Ticaret Üniversitesi); Sevcen Kahraman (İstanbul Ticaret Üniversitesi)
- 177 **Weather-Robust Lane Detection via Morphological Consolidation and Deterministic Spatial Classification**
Kareem Alzalik (İstanbul Okan University)*; Sara Khamis (İstanbul Okan University); ELBARA ELTAHIR (İstanbul Okan University); Ezgi Uzun (İstanbul Okan University); Mahsa Mikaeili (İstanbul Okan University)

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6 papers

- 255 **Batch Normalization Katlamalı Sabit Nokta CNN'in FPGA Üzerinde Gerçeklenmesi ve Doğrulanması**
Yasemin Yilmazoglu (Marmara University)*; Sezen Bal (Marmara University)
- 258 **Predicting Mental Health Status In Thalassemia Patients Using Machine Learning Methods**
Yavuz Alp Beydoğan (Muş Alparslan University); Ümmü Söylemez (Muş Alparslan University)*; Burcu Bakir Gungor (Abdullah Gul University); Malik Yousef (Kinneret Academic College)
- 389 **Churn Prediction for Subscription-Based Applications Using Sequential Learning**
Beyza Nur Ulu (Mindsane Ltd Co); Hamza Gözükkara (Mindsane Ltd Co); Emir Çetin Memiş (Mindsane Ltd Co); Yasemin Kurtçu-Meşe (D-Smart Inc.); Emir Obalı (D-Smart Inc.); Erkan Kara (D-Smart Inc.); Ozan Köseoğlu (D-Smart Inc.); Tuna Çakar (MEF University)*
- 268 **Binary Classification of Fault Injection Outcomes at the Function Level Using Hardware Performance Counters**
Sanem Arslan Yılmaz (Marmara University)*
- 273 **Low-Complexity Recurrent Neural Network Detector for Faster-than-Nyquist Signaling**
Nurettin ŞAFAK (Ankara Yıldırım Beyazıt Üniversitesi)*; Osman Tokluoglu (Ankara Yıldırım Beyazıt Üniversitesi); Enver Cavus (Ankara Yıldırım Beyazıt Üniversitesi)
- 286 **Makine Öğrenmesi ve Derin Öğrenme Yöntemleri ile Eksik Trafik Verisi Tamamlama Karşılaştırmalı Bir Analiz**
Berfin Yapıcı (MOSAŞ)*; Akif Durdu (Konya Teknik Üniversitesi)

23 Robotics, Autonomous & Embedded Systems

AB1-409

6 papers

- 250 **Multi-Sensor Pedestrian Tracking with Re-Identification-Based Identity Recovery for Autonomous Mobile Robots**
Umut Özkan (Istanbul Technical University)*; Volkan Sezer (Istanbul Technical University)
- 288 **Safe and Live LLM Guided UAV Navigation via Certified Corridor Feedback**
Hayder Almamoori (ege university)*; Özkan AKIN (Ege university)
- 220 **Adaptive Grasping Through Proprioceptive Electrical Signal Inference Without External Force Sensors**
Emine TAPAN (Türk-Alman Üniversitesi)*; Dilek GÖKSEL DURU (Türk-Alman Üniversitesi)
- 44 **Health-Conditioned Vision-Language-Action Models for Malfunction-Aware Robot Control**
Huseyin Arslan (Hacettepe University)*; Ozgur Erkent (Hacettepe University)
- 27 **Pekiştirmeli Öğrenme ile İnsansı Yürüyüş: Parametrik ve Hareket Yakalama Referansları**
Hasan Atıcı (Yıldız Technical University)*; Erkan Uslu (Yıldız Technical University)
- 359 **Real-Time Multi-Target Tracking Architecture for Indoor Robotics Using Low-Cost LiDAR and UKF-CTRV**
Emre Berkin Çetin (Marmara Üniversitesi, Elektrik-Elektronik Mühendisliği Bölümü); Osman Eren Köse (Marmara Üniversitesi, Elektrik-Elektronik Mühendisliği Bölümü); Kadir Yokuş (Marmara Üniversitesi, Elektrik-Elektronik Mühendisliği Bölümü); Engin Masazade (Marmara University)*

24 ML & Deep Learning

AB1-509

6 papers

- 107 **Assessing Road Accessibility from Post-Disaster Images: A SegFormer and Topological Graph-Based Approach**
Rukiye aslan (Fırat Üniversitesi)*; Özgür Karaduman (firat universitesi)
- 393 **Bounced Check Risk Prediction via Contrastive Representation Learning and Business Aware Threshold Optimization**
Ekin Güçlüel (Mindsane Ltd Co); Kerem Kaya (Mindsane Ltd Co); Emir Çetin Memiş (Mindsane Ltd Co); Seyit Ertuğrul (TAM Finans A.Ş.); Hakan Karamanlı (TAM Finans A.Ş.); Erkal Bıyıklıoğlu (TAM Finans A.Ş.); Semen Son-Turan (MEF University); Yassine Drias (MEF University); Tuna Çakar (MEF University)*
- 208 **CTGAN Based Data Augmentation for Band Gap Regression in Materials Science**
Ekin İşkol (Istanbul Kultur University)*; Atilla Özmen (Istanbul Kultur University)
- 199 **Comparative Analysis of Malware Features on Malware Detection Accuracy**
Gonca Gülşen (Ankara University)*; Refik Samet (Ankara University)
- 203 **Dynamic Segmentation of Mobile Application Profiles via Network Traffic Metrics**
Mehmet Galip Tezcan (TT MOBIL COMMUNICATION SERVICES INC); Sedat Çimen (TT MOBIL COMMUNICATION SERVICES INC)*
- 147 **Graph-Based Wildfire Prediction with a Türkiye-Centered Benchmark**
Serdar Biçici (Istanbul Technical University)*; Faik Boray Tek (Istanbul Technical University)

25 Energy, Smart Grids & Cities

AB1-510

6 papers

- 341 **Robust Vehicle Tracking and State Estimation via Kalman-Filtered ISAC in 6G Networks**
nergis erdem (Mudanya University)*
- 243 **ALAS: An Edge-AI Assistive Navigation System for Visually Impaired Pedestrians**
Yasin YILDIRIM (Ankara Science University)*; Mahmut Nedim Alpdemir (Ankara Science University); Enes Ünlü (Ankara Science University); Mehmet Algül (Ankara Science University); İlayda Yakar (Ankara Science University)
- 270 **Comparison of LSTM and BiLSTM Based PV Forecasting Algorithms for Rooftop Residential Energy Management**
Irmak Önal Korkut (Yasar University)*; Sezai Polat (Directorate of Construction Works and Technical İzmir Katip Çelebi University); Emrah Bıyık (Yasar University)
- 407 **Energy Production Forecasting for Rooftop PV Systems Using Deep Learning and Artificial Bee Colony Optimization: A Real Data Approach**
DERYA BETUL UNSAL (CUMHURİYET UNIVERSITY)*; Metin YILMAZ (Cumhuriyet University)
- 207 **Foundation Models for Cold-Start Electricity Load Forecasting: A Controlled Benchmark Against Lightweight Baselines**
Mehmet Ali Akyol (Beko)*
- 302 **Robustness Evaluation of Machine Learning-Based N-1 Security Classification Under Communication Latency in Power Systems**
Bekir Bugra Uyar (Manisa Celal Bayar University)*; Kemal Ekşi (Manisa Celal Bayar University); Sezai Taşkın (Manisa Celal Bayar University)

12:00–13:30

Lunch

13:30–14:30

Keynote #3

Speaker: Prof. Dr. Hazım Kemal Ekenel

14:30–15:00

Coffee Break

Parallel Session 6

15:00–16:30

26 Computer Vision & Pattern Recognition

AB1-407

6 papers

- 271 **Yüksek Hızlı Hareket Koşullarında Olay Kamerası ve Standart Kamera ile ArUco İşaretçi Tespit Performanslarının Karşılaştırılması**
ozan nural (AYBU)*; Gökhan Koray Gültekin (AYBU)
- 277 **A Tile-Based Edge Inference Approach for Ship Detection and Classification in Large-Scale SAR Images**
Murat Şehzade (Aselsan)*
- 216 **Depth Anything V2 ve YOLOv8 ile KITTI Üzerinde Kalibrasyon Tabanlı İki Aşamalı Monoküler Yaklaşık 3B Nesne Konumlandırma**
Mehmet Furkan Ketme (Bursa Tech. University)*; Oğuz Mısır (Bursa Tech. University)
- 235 **Multi-class Crowd Localization for Object Detection in Aerial Images**
Kemal Y. Daskiran (Istanbul Technical University); Bilge Günsel (Istanbul Technical University)*; Ozge I. Yalız (Istanbul Technical University)
- 186 **Süperpiksel Rehberli Hiyerarşik Grafik Transformer Mimarisi ile Hiperspektral Görüntü Rekonstrüksiyonu**
MUHAMMED EMİN EKİM (Muhammed Emin EKİM)*
- 206 **Termal Görüntülerde Küçük Nesne Tespit Performansının İyileştirilmesi**
Utku Temin (Istanbul Medeniyet University); Filiz Gurkan (Istanbul Medeniyet University)*

- 213 **Detection of Artificial Intelligence Generated Texts in Turkish**
Ferhat Akalan (Bursa Technical University)*; Hayri Volkan Agun (Bursa Technical University)
- 215 **Comparative Evaluation of Deep Learning-Based Multi-Band NIR-to-RGB Colorization under Dark Conditions**
Cagri Yilmaz (Kocaeli University)*; Enes Eveyik (Kocaeli University); Cem Kerem Sahin (Kocaeli University); Aysun Tasyapi Celebi (Kocaeli University)
- 226 **XTOX: Comparative Multi-Task and Graph-Based Molecular Learning with ECFP4 Feature Attribution for Toxicity Profiling**
Buse Sönmez (Biruni University)*; Damla Tezal (Biruni University); Güray Yılmaz (Biruni University)
- 228 **Clinically Interpretable Skin Lesion Diagnosis: ABC-Guided Counterfactual Explanations on HAM10000**
Samet Kaya (Fatih Sultan Mehmet Vakıf University)*
- 231 **Vayu: A Multi-Agent LLM Architecture for Hotel Guest Experience and Owner Intelligence**
Semih Burak Atılğan (Ted University)*; Münir Tuna Telatar (Ted University); Müslüm Türker Kırtız (Ted University); Ravan Mamiyev (Ted University); Murat Karakaya (Ted University)
- 251 **WavLM Tabanlı Ses Sahteciliği Tespiti ve Veri Setleri Arası Genelleme Analizi**
Fatma Dişçi (Tübitak Bilgem)*

- 236 **Simulation-Based Slip Monitoring for Tracked Mobile Robots Using IMU and Encoder Sensor Fusion**
Giray Arel (Başkent Üniversitesi Elektrik Elektronik Mühendisliği Bölümü); Mustafa Efe İkinci (Başkent Üniversitesi Elektrik Elektronik Mühendisliği Bölümü); Eren SEVÜK (Başkent Üniversitesi Elektrik Elektronik Mühendisliği Bölümü); Berke Yıldırım (Başkent Üniversitesi Elektrik Elektronik Mühendisliği Bölümü); Deniz Karaçor (Başkent Üniversitesi Elektrik Elektronik Mühendisliği Bölümü); Gülşah Demirhan Aydın (Başkent Üniversitesi Elektrik Elektronik Mühendisliği Bölümü)*
- 195 **Yer İşareti Tabanlı Görsel Öğretim ve Tekrar ile Mikro İHA'lar için GNSS'siz Seyrüsefer**
salim Bayarı (Yıldız Teknik Üniversitesi)*; Furkan Çakmak (Yıldız Teknik Üniversitesi)
- 126 **A Multimodal Gated Fusion Network for Cooking Termination in Smart Ovens**
Beyza Kulakaç (Beko Corporate)*; Tevfik Kadioğlu (Beko Global); Ayhan Küçükmanisa (Kocaeli Üniversitesi)
- 279 **Extended Kalman Filtering for Joint Carrier Recovery and Cumulant-Based Modulation Classification on Real Software-Defined Radio Captures**
Furkan Cüneyt Soy (Marmara University, Department of Electrical and Electronics Engineering); Burak Efe (Marmara University, Department of Electrical and Electronics Engineering)*; Engin Maşazade (Marmara University, Department of Electrical and Electronics Engineering)
- 84 **Hardware-Aware Validity-Based Sensor Selection for Time-Aligned Multi-IMU Fusion on FPGA**
Caner Yoldaş (Başkent University)*; Gülşah Demirhan Aydın (Electrical and Electronics Engineering Department, Başkent University)
- 55 **A Hybrid Framework for Exploratory Web Testing: Integrating Reinforcement Learning with Large Language Models**
Tunahan Aktaş (Istanbul Technical University)*; Mehmet Keskinöz (Istanbul Technical University)

29 ML & Deep Learning

AB1-509

6 papers

- 193 **Leakage-Free Day-Ahead Electricity Price Forecasting for the Turkish Electricity Market Using Machine Learning**
Doğukan Çelik (Istanbul Technical University)*; Mehmet Keskinöz (Istanbul Technical University)
- 86 **Performance Comparison of Wavelet Neural Network Architectures for Time-Series Prediction**
Olgu Altıntaş (Istanbul Technical University)*; Mehmet Keskinöz (Istanbul Technical University)
- 156 **Personalized Federated Learning for Multimodal Driving Behavior Classification**
Erkam Alhan (Yıldız Technical University)*
- 333 **Predicting Retail Store Employee Tenure: A Machine Learning Approach**
Eyüp Tolunay Küp (A101 Yeni Mağazacılık)*; Cihat Erdoğan (A101 Yeni Mağazacılık); Narod Boyacı (Kadir Has University); Sibel Çayır (A101 Yeni Mağazacılık); Ersan Demir (A101 Yeni Mağazacılık)
- 383 **Privacy-Preserving Multi-Level Audit Opinion Classification Using Concrete ML and Ensemble Learning**
Elif Kucur (Marmara University); Tolga Büyüktanır (Agra Fintech Software Solutions); Kazım Yıldız (Marmara University)*
- 398 **Reducing the Environmental Impact of E Commerce Machine Learning Workloads with Dataset Distillation and Carbon Aware Training Scheduling**
Oğuz Akif Tüfekçioğlu (Cimri Bilgi Teknolojileri ve Sistemleri A.Ş.); Tuna Çakar (MEF University)*

30 Optimization, Fuzzy & Hybrid Systems

AB1-510

6 papers

- 58 **Artificial Rabbits Optimization Based Proportional Integral Feedforward Control of a Coupled Tank Liquid Level System**
Tugrulhan AKGUL (Erzurum Technical University)*
- 218 **Comparative Investigation of Optimization Strategies for Electromagnetic Performance Enhancement in PMSMs**
Berke Tezcan (Adana Alparslan Türkeş Bilim ve Teknoloji Üniversitesi)*; Burak Esenboğa (Adana Alparslan Türkeş Bilim ve Teknoloji Üniversitesi)
- 312 **Dynamic Pricing for Last-Mile Delivery Using Soft Actor-Critic Reinforcement Learning**
Serdar Sonmez (Özyeğin University)*; Melike Karakaya (Özyeğin University); Ulas Altun (Özyeğin University); Orsan Ozener (Özyeğin University)
- 29 **Matematik-Tabanlı Metasezgisel Algoritmalar ile Retinal Görüntülerde Kanamalı Bölge Tespiti**
Mehmet Bahadır Çetinkaya (Erciyes Üniversitesi, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü)*; Sevim Adige (Sakarya Uygulamalı Bilimler Üniversitesi, Hendek Meslek Yüksekokulu, Elektronik ve Otomasyon Bölümü)
- 211 **Optimal Design of a Fractional-Order PI Controller for Hysteresis Current-Controlled BLDC Motor Drives Using Electric Eel Foraging Optimization**
Sefa Kurtoğlu (Marmara Teknokent A.Ş.); Mehmet Usta (Giresun University)*
- 257 **Investigation of the Effect of the Slope Parameter Variation on the Performance of a Single-Input Fuzzy PD Controller**
Cenk Ulu (Yıldız Technical University); Ege Günay (Yıldız Technical University)*

17:00

End of 2nd day

17:00–18:30

Heading to Gala Dinner

18:30–21:30

Gala Dinner (Yıldız Teknik Üniversitesi Hisar Tesisleri)

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ASYU 2026 · DETAILED CONFERENCE PROGRAM

Day 3 · Friday, September 11, 2026

08:00–08:45

Registration

Parallel Session 7

08:45–10:00

31 SPECIAL: Chaotic Systems

AB1-407

5 papers

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AI-Driven Wildfire Spread Prediction: Leveraging Stable Diffusion Models and Satellite Data

Amar Atoum (Dokuz Eylul)*; Semih Utku (Dokuz Eylul University)

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Hybrid Feature Extraction with EfficientNet-B0 for Deepfake Detection

AHMET AKBAŞ (Bilecik Şeyh Edebali University)*; PARWIZ ABDUL HAMEED (Bilecik Şeyh Edebali University); HALİL İBRAHİM ÇAKIR (Kütahya Dumlupınar University)

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WasteNet-Lite: A Lightweight and Explainable MobileNetV2-Based Waste Classification Model for Resource-Constrained Devices

Ali Arslan (İstanbul Ticaret Üniversitesi)*; Mehmet Sezgin (İstanbul Ticaret University)

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Çeşitli Büyük Dil Modelleri Üzerinde Bilgi Getirme Destekli Üretim Degerlendirilmesi

Ömer Kartlı (Medipol University)*; selim akyokuş (Medipol University); Salih Sarp (Gebze teknik Üniversitesi)

329

Güneş Enerjisi Tahminlemede Derin Öğrenme Modellerinin Kararlılık Analizi: Karapınar YEKA-1 GES Üzerine Deneyisel Bir Çalışma

sibel birtane akar (istanbul arel university)*; Zeynep Gülbahar Ferhatlar (istanbul arel university)

32 ML & Deep Learning

AB1-408

5 papers

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SHAP-σ: A Label-Free Rashomon Pipeline for Multivariate Time-Series Anomaly Detection

Ugur Dar (Eskisehir Technical University)*; Jeriek Van den Abeele (Telenor); Mustafa Cavus (Eskisehir Technical University); Sara Malacarne (Telenor)

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SWIDS: When Does Sliding-Window Temporal Context Help Flow-Based Intrusion Detection?

Alperen Çakın (Graduate School of Science and Engineering, Hacettepe University); Selma Dilek (Computer Engineering Department, Hacettepe University); Burçak Asal (Institute of Informatics, Hacettepe University)*

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Towards Reliable Feature Explanations in Correlated Data: A Rashomon Accumulated Local Effects Framework

Yiğitcan Yardımcı (Eskişehir Teknik Üniversitesi)*; Mustafa Cavus (Eskişehir Teknik Üniversitesi)

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TrustKey: A Calibrated Hybrid Keystroke Biometric Authentication Framework with Adversarial Robustness Evaluation on the CMU Benchmark

Abdul Hasib (University of Frontier Technology, Bangladesh); Md. Taslim Arif (University of Frontier Technology, Bangladesh); Farzana Akter (University of Frontier Technology, Bangladesh); Aditya Rajbongshi (University of Frontier Technology, Bangladesh); MD IMRAN HOSEN (Bahcesehir University)*

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Weakly Supervised Retail Fraud Detection with Snorkel Labeling and Heterogeneous Graph Neural Networks

Zeynep Behşi (Mindsane Ltd Co); Emir Çetin Memiş (Mindsane Ltd Co); Özcan Ayyıldız (Eve Retails Inc.); Betül Akdağ (Eve Retails Inc.); Büşra Tosun (Eve Retails Inc.); Semen Son-Turan (MEF University); Nazlı Karamollaoğlu (MEF University); Yassine Drias (MEF University); Tuna Çakar (MEF University)*

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Turkish Address Extraction from Earthquake Relief Messages using Deep Learning

Kutay Mumcu (Özyeğin University)*; Ata Tan Dağıdır (Özyeğin Üniversitesi); Kerem Kaya (Özyeğin Üniversitesi); Olcay Taner Yıldız (Özyeğin Üniversitesi)

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Türkçe Büyük Dil Modellerinin Bilgi, Muhakeme ve Güvenilirlik Eksenlerinde Çok Eksenli Karşılaştırmalı Değerlendirmesi

Muhammet Tarık Yılmaz (Sakarya University of Applied Sciences)*; Muhammed Ali Pala (Sakarya University of Applied Sciences); Yusuf Çakır (Necmettin Erbakan University)

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Türkçe Eşzamanlı Konuşma Çevirisi İçin Sentetik Veri ve Alan Uyarlaması

Yunus Emre Ozkose (Sestek)*; Ali Haznedaroğlu (Sestek)

204

Zero-Shot vs. Few-Shot Question Extraction from Turkish Tax Rulings: A Comparison of Open-Weight LLM Families

Zeynep Bakanoğulları (TED University)*; Kasım Murat Karakaya (TED University); Hakan Emekçi (TED University); Ahmet Baran Dinçoğlu (TED University); Erdem Atak (TED University)

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Çeldirici Manipülasyonu ve Rol Bazlı Prompt Kullanımının Açık Kaynak Büyük Dil Modellerinin Çoktan Seçmeli Sorularda Doğru Cevap Üretme Performansına Etkisi

Zeynep Bozdoğan Sabah (Düzce Üniversitesi)*

194

A Two-Stage Hybrid Pipeline for Real-Time Network Anomaly Detection and Attack Classification: A Dependency-Free Java Implementation Evaluated under Cross-Dataset Domain Shift

Ubeydullah Sarioglu (Karadeniz Technical University); İbrahim Ugur Yılmaz (Karadeniz Technical University); Gökhan Aydın (Karadeniz Technical University); Yavuz Haliloğlu (Mavi Alp Information Technologies); Hakan Aydın (Karadeniz Technical University)*

33

Sigma-Verifier: Reducing Silent Errors in Receipt Total Extraction via Structural Arithmetic Verification

Efe Bektas (Istanbul Technical University)*; Mehmet Keskinöz (Istanbul Technical University)

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Vulnerability of Heterogeneous Graph Learning Models to White-Box Feature Attacks

Gizem Karyağdı (Eskisehir Osmangazi University); İlker Özcelik (Eskisehir Osmangazi University)*; Elis Soylu Yılmaz (Eskisehir Osmangazi University)

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LOCO: Testing Resilience of Microservices with Kubernetes under High Load and Chaos

Osman Serhat Yılmaz (Ozyegin University); Ata Baranta (Ozyegin University); ISMAIL ARI (ÖZYEGIN UNIVERSITESI)*; Sandeep Pirbhulal (NRS); Habtamu Abie (NRS)

- 324 **Modelling And Solving Multi-Objective Unequal Area Facility Layout Design Problem With Variable Facility Dimensions Under Fuzzy Stochastic Environments**
Kenan Tan (Dokuz Eylül University)*; Assoc. Prof. Kemal Subulan (Dokuz Eylül University); Prof. Efendi Nasiboğlu (Dokuz Eylül University)
- 259 **Online Tuning Mechanism for a Single-Input General Type-2 Fuzzy PID Controller**
İhsan Şahin (Yıldız Technical University)*; Cenk Ulu (Yıldız Technical University); İhsan Şahin (Sakarya University of Applied Sciences)
- 345 **An_Uncertainty-Driven_Hybrid_Deep_Learning_Approach_for_Broad-Coverage_RF_Modulation_Recognition**
Nurettin ŞAFAK (Ankara Yıldırım Beyazıt Üniversitesi)*; Özgün ERSOY (Ankara Yıldırım Beyazıt Üniversitesi); Durdu Can YERDEYATAR (Ankara Yıldırım Beyazıt Üniversitesi); Muhammet Sefa DEMİREL (Ankara Yıldırım Beyazıt Üniversitesi); Alperen MARAŞLI (Ankara Yıldırım Beyazıt Üniversitesi); Taha Eren ATMACA (Ankara Yıldırım Beyazıt Üniversitesi)
- 181 **RPL Objective Function with Duty-Cycle and Transmission Power Awareness for ETSI EN 300 328 Compliance**
Muhammad Zeeshan (Karadeniz Technical University)*; Blessed Junior Ngorima (Karadeniz Technical University); Mahan Habibian Fard (Karadeniz Technical University); Sedat Gormus (Karadeniz Technical University)
- 233 **Uncertainty-Driven Deep Reinforcement Learning for Smart Industrial Filling**
Tania Sarraf Jadidian (Marmara University Department of Electrical and Electronics Engineering); Ömer Sabri Emeksiz (Koç University Department of Computer Engineering); Engin Maşazade (Marmara University Department of Electrical and Electronics Engineering)*; Suat Selim (Baykon Industrial Weighing Systems)

10:00–10:30

Coffee Break

Parallel Session 8

10:30–12:00

- 159 **Comparative Analysis of Deep Learning Architectures for Remaining Useful Life Prediction in Industrial Equipment: LSTM, GRU, and Hybrid Models on NASA C-MAPSS Dataset**
Han Sitt Aung (Istanbul Okan University)*; Hein Min Naing (Istanbul Okan University)
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UAV Görüntülerinde Barkod Tespiti için Hafif Derin Öğrenme Mimarilerinin Karşılaştırmalı Analizi ve Uçtan Uca Çözümleme Değerlendirmesi

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Compact Convolutional Segmentation for Visual Landmark Extraction in GNSS-Denied UAV Navigation

Sude Ertan (Ankara Yıldırım Beyazıt University)*; Osman Tokluoglu (Ankara Yıldırım Beyazıt University); Mustafa Ozturk (TAYF Researching and Development Engineering Consulting Inc.)

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Berke Ersöz (Ankara Yıldırım Beyazıt University)*; Ömer KARAL (Ankara Yıldırım Beyazıt University)

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WS-CAM-GIF: Interaction-Aware Global-Local Representation Learning for Brain MRI Classification

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TürkFC-26K: Türkçe Fonksiyon Çağrısı için Çok Katmanlı Sentetik Veri Seti ve Benchmark Tasarımı

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Urvesh Patel (Royal Holloway University of London); Gino Daniel Legi (Royal Holloway University of London); Satya Shah (Royal Holloway University of London)*

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Seneca-CyBench: Cybersecurity Domain-Specific LLM Benchmark

Alican Kiraz (Trendyol A.Ş.); Tuna Çakar (MEF University)*

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Award Ceremony & Closing