



International Symposium on AI-Driven Engineering Systems

Symposium Information

June 19-20, 2025 | Tokat Gaziosmanpasa University - Tokat - Türkiye

www.isades.org

ISADES2025 Committees

Honorary Committee

- » Prof.Dr. Fatih Yılmaz, Rector of Tokat Gaziosmanpaşa University, Türkiye

Symposium Chair(s)

- » Prof.Dr. Tekin Susam, Tokat Gaziosmanpaşa University, Türkiye
- » Prof.Dr. Turgut Özseven, Tokat Gaziosmanpaşa University, Türkiye

Advisory Committees

- » Prof. Dr. Mehmet Emir Köksal, Ondokuz Mayıs University, Türkiye
- » Prof. Dr. Muharrem Düğenci, Karabük University, Türkiye
- » Prof. Dr. Remzi Yıldırım, Tokat Gaziosmanpaşa University, Türkiye
- » Prof. Dr. Serhii Yevseiev, National Technical University "Kharkiv Polytechnic Institute", Ukraine
- » Prof. Dr. Shahnaz N. Shahbazova, Azerbaijan Technical University, Azerbaijan
- » Prof. Dr. Şahin Yıldırım, Erciyes University, Türkiye
- » Prof. Dr. Tanupriya Choudhury, Graphic Era University, India
- » Assoc.Prof.Dr. Korhan Cengiz, University of Fujairah, United Arab Emirates
- » Assoc.Prof.Dr. Mahir Kaya, Tokat Gaziosmanpaşa University, Türkiye
- » Assoc.Prof.Dr. Özkan İnik, Tokat Gaziosmanpaşa University, Türkiye
- » Assoc.Prof.Dr. Zafer Doğan, Tokat Gaziosmanpaşa University, Türkiye
- » Assist.Prof.Dr. Mehmet Tokatlı, Tokat Gaziosmanpaşa University, Türkiye

Technical Program Committee Members

- » Ahmed Al-Durra, Khalifa University, UAE
- » Ali Akdağ, Tokat Gaziosmanpaşa University, Türkiye
- » Ali Durmuş, Erciyes University, Türkiye
- » Azzedine Draou, The Islamic University in Madinah, Saudi Arabia
- » Carlos Alves, Polytechnic Institute of Castelo Branco, Portugal
- » Cengiz Güngör, Tokat Gaziosmanpaşa University, Türkiye
- » Deniz Merdin, Tokat Gaziosmanpaşa University, Türkiye
- » Ebubekir Yaşar, Tokat Gaziosmanpaşa University, Türkiye
- » Emrah Eser, Tokat Gaziosmanpaşa University, Türkiye
- » Fa'eq Radwan, Near East University, Cyprus
- » Harun Serhat Gerçekcioğlu, Tokat Gaziosmanpaşa University, Türkiye
- » Halime Somtürk, Tokat Gaziosmanpaşa University, Türkiye
- » Irada B. Dadashova, Baku State University, Azerbaijan
- » Jamshed Iqbal, University of Hull, England
- » Kadir Sarıkaya, Tokat Gaziosmanpaşa University, Türkiye
- » Kenan Zengin, Tokat Gaziosmanpaşa University, Türkiye
- » Kübra Tancı, Tokat Gaziosmanpaşa University, Türkiye
- » Levent Gökrem, Tokat Gaziosmanpaşa University, Türkiye
- » Mehmet Serhat Can, Tokat Gaziosmanpaşa University, Türkiye
- » Mete Çelik, Erciyes University, Türkiye
- » Mithat Şimşek, Tokat Gaziosmanpaşa University, Türkiye
- » Mohd Zulkifly Abdullah, Universiti Sains Malaysia, Malaysia
- » Mustafa Altıok, Tokat Gaziosmanpaşa University, Türkiye
- » Mustafa Eker, Tokat Gaziosmanpaşa University, Türkiye
- » Mustafa Özsoy, Tokat Gaziosmanpaşa University, Türkiye
- » Mürsel Önder, Tokat Gaziosmanpaşa University, Türkiye
- » Recep Özdağ, Yüzüncü Yıl University, Türkiye
- » Tufan Doğruer, Tokat Gaziosmanpaşa University, Türkiye
- » Yasemin Çetin Kaya, Tokat Gaziosmanpaşa University, Türkiye

ISADES2025 Accepted Papers

ID	Title	Author(s)
1	A Novel Deep Learning Model for Diabetes Diagnosis	Haniyeh FATTAHI, Yousef Farhang
3	A Deep Learning Framework for the Identification of Distinct Stages in Diabetic Retinopathy through Retinal Image Analysis	Dinul Rupasinghe, Kasun Samarawickrama
4	Explainable Multi-Task Deep Learning for Blood Glucose Forecasting: A Lightweight, Interpretability Focused Approach	Sarmad Maqsood, Muhammad Abdullah Sarwar, Egle Belousovienė, Rytis Maskeliūnas
5	Lightweight Attention-Based Framework for Semantic Segmentation and Compression of 3D LiDAR Data	Rytis Maskeliūnas, Sarmad Maqsood
7	Attention-Augmented DenseNet Architectures with Feature Selection for High-Performance Image Classification	Murat CANAYAZ
8	Bibliometric Analysis of Prostate Cancer and Deep Learning	Nihan ÖZBALTAN
9	Öneri Sistemlerinde Kişilik Özelliklerine Göre Performans ve Popülerlik Yanıtlığı Analizi	Tuğba Türkoğlu Kaya
10	Brain Tumor Classification Using Fine-Tuned Transfer Learning	Mustafa Suban Dut, Meriç Çetin
11	Comparative Analysis of cVAE, cGAN, and LSTM Models for Music Generation Based on Weather Conditions	Nedim Karavdic, Becir Isakovic
12	Opportunities and Challenges of Using Artificial Intelligence in the Educational System	Inga Abuladze
15	Advanced Maritime Vessel Detection in Satellite Imagery Using Masati-V2	Keerthi Reddy Gudibandi, Venkata Sai Suchitha Sreeram, Sreenivasulu Chamarthi, Hajarathaiah Koduru
16	Ülkelerin Yolsuzluk Algısını Şekillendiren Faktörler: Dünya Mutluluk Endeksi ve Enflasyon Göstergelerinin Rolünün Açıklanabilir Yapay Zeka Yöntemleri ile İncelenmesi	Ensar Yılmaz, Burak Aktürk, Tolga Büyüktanır
17	Adapting Artificial Intelligence for Teaching Competency-Based courses: A framework for TVET Institutions	Walusansa Y. Yusuf , Adam A. Alli, Lwembawo Ibrahim, Magombe Yasin, Kasadha Juma
19	A Framework for Artificial Intelligence Driven Business Model Innovation for Universities: A case of Islamic University in Uganda	Swabra Nakamanya, Adam A. Alli
21	A Comparative Evaluation of Interpolation and Generative Oversampling Techniques for Predictive Maintenance	Abdazeez Atere, Hasan Kivrak
23	AI-Driven Financial Forecasting in Higher Education: A Case Study of the Islamic University in Uganda (IUIU)	Magombe Yasin, Adam A. Alli
25	Using bigdata in Enhancing Patient Preparedness for Surgical Procedures and Improving Business Process Management in Hospitals in low developed countries: A Case Study of Uganda.	Hamudani Sekizivu
26	Study of FPGA – Based Spiking Neural Networks: Classification Implementation	Mehmet Sinan Çınaroğlu, Erol Seke
28	COVID-QU-Ex Görüntü Verisi ile CNN Tabanlı COVID-19 Sınıflandırmasında Derin Öğrenme Modellerinin Karşılaştırılması	Nihan ÖZBALTAN, Halil Erdem ÜNGÖR
29	A Conceptual Framework for AI-Assisted Monitoring in Microalgae Cultivation: A Case Study on Synechococcus elongatus PCC 3055	Betül Güroy, Derya Güroy, İzzet Şahin, Serhan Mantoğlu, Mustafa Rüçhan Pekcan
30	XAI-Powered Comparative Diabetes Prediction with XGBoost, SVM and Artificial Neural Networks	Furkan Sefa Demirci, Remzi Yıldırım
31	An AI-Driven Drone-Integrated Mobile Photobioreactor System: A Novel Approach to Atmospheric Carbon Sequestration and Oxygen Emission	Betül Güroy
33	A Comparative Evaluation of Blockchain Consensus Algorithms in Terms of Energy Efficiency and Performance Metrics	Doğukan ÇATAL, Mehtap KÖSE ULUKÖK

ID	Title	Author(s)
34	Detection of Solar Panel Defects via Thermal-Optical Image Fusion Using YOLOv11: An Embedded System-Based Approach	Emirhan Uysal, Enes Karanisoğlu, Furkan Hanlı, Mehmet Serhat Can
35	AI-Based Blood Test Analysis Chatbot: Interpretation of Medical PDF Reports in Turkish	Sidal Deniz Bingöl, Damla Nur Alper
36	Yapay Zeka ve Doğal Dil İşleme ile Türkçe Metinlerden Siber Zorbalık Tespiti	Halid Buğra Gökdeniz, Pelin Canbay
37	Plotting of Generative AI-Images via Low-Cost Robotic Arm	Rıdvan Yayla
38	Asenkron Motor Hız Tahmininde İnterpolasyon ve Eğri Uydurma Yöntemlerinin Kullanımı	Emrah Eser
39	Comparative Analysis of Deep Learning Models for COVID-19 Detection in X-Ray Images	Ali Bayram, Nihan ÖZBALTAN
40	Numerical Analysis of a Simple Controller Mechanism for a Swimming Center Pattern Generator	Yavuz Cura, Nimet Korkmaz
41	Deep Learning Approaches for Lung Cancer Classification: A Comparative Study of Multiple Model Architectures	Ayşe Nur Durmaz, Nihan ÖZBALTAN
42	Prediction of Carpal Tunnel Syndrome Using Machine Learning	Selçuk Çebi, Merve Aydın
43	Bitki hastalıklarını tespit eden görüntü işleme sistemli mobil uygulama	Yiğitcan Soylu, Mustafa Altıok
44	Design and Comparative Analysis of Dual-Band Microstrip Antennas at 28/38 GHz Using FR-4 and Rogers 5880 Substrates	Bilal Okan İÇMEZ, Çetin KURNAZ
45	Sürdürülebilir Sokak Aydınlatması: Yüksek Basıncılı Sodyum Armatürlerden LED ve PV Destekli Sistemlere Geçişin Enerji ve Karbon Açısından Değerlendirilmesi	Şükrü Göksu, Yeliz Yoldaş Seven
46	A Review of Artificial Intelligence Based Methods in Solar and Wind Energy Generation and Management	Emre Güler
47	Raft Tabanlı Alternatif Konsensüs Algoritmalarının Performans Analizi	Halil İbrahim Yılmaz, Ahmet Coşkunçay
48	Kalp Hastalığı Risk Tahmini için Makine Öğrenmesi Tabanlı Mobil Uygulama	Bartu Başaran, Ali Akdağ
49	Solving Distributed Job Shop Scheduling Problems Using Whale Optimization Algorithm with Encoding Schemes	Okan Uzunoğlu, Mehmet Akif Şahman, Sedat Korkmaz
50	Multiple Object Detection and Tracking in Real-Time Aerial Imagery with Deep Learning Architectures	Betul Akyuz, Melih Bahadır, Ozkan Inik
59	Energy Loss and Panel Fault Detection in Solar photovoltaic Systems Using Extreme Gradient Boosting algorithm	Adem Atmaca, Fatma Zehra Kardaş
63	Yapay Zeka Destekli Beyin Bilgisayarlı Tomografi Görüntülerinden Beyin Kanaması Tipi Lokalizasyonu ve Risk Seviyesi Testi Yaklaşımı	NECATİ OLGUN, MEDİNE ATMACA
64	A New Perspective on Managing Industrial Ovens with Intel x86 Based Microprocessors	Gökhan Uçkan, Nedim Kurtuluş
65	El Yazısı Karakterlerin Tanınmasında Derin Sinir Ağlarının Etkinliği Kısıtlı ve Geniş Sınıf Yapılarının Performans Analizi	Erdin Fidan, Mahir Kaya
66	Öğrenci Başarısının Makine Öğrenmesi ile Tahmini: UCI Öğrenci Performans Veri Seti Üzerine Karşılaştırmalı Bir Analiz	Abdulkadir Alabdullah, Yasemin Çetin Kaya
68	IoT / PLC Based Low Consumption Washing Machine Control	Engin Oğuzay, Gökhan Uçkan
51	Accurate and Scalable Object Detection for Smart Warehousing Using YOLOv8 and Residual CNNs	Iman Elawady, Abdulrahman Al Homsı, Omer Ahmed Mohamed Ahmed
54	Comparative Review of Machine Learning Methods in Revenue Forecasting	Ali Taghiyev, Ozkan Inik
67	Yapay Zeka Teknikleri Kullanılarak Kötü Amaçlı Yazılımların Analizi Ve Güvenlik Açıklarının Tespiti	Ayat Faruk Swadı Swadı, Remzi Yıldırım

ISADES2025 Program

Session 1. (HALL1)	
Chair: Mustafa Altıok	
Date: June 19, 2025	
Time (GMT+3): 10:30 am - 12:30 pm	
Paper	Author (s)
Explainable Multi-Task Deep Learning for Blood Glucose Forecasting: A Lightweight, Interpretability Focused Approach	Sarmad Maqsood, Muhammad Abdullah Sarwar, Egle Belousovienė, Rytis Maskeliūnas
Lightweight Attention-Based Framework for Semantic Segmentation and Compression of 3D LiDAR Data	Rytis Maskeliūnas, Sarmad Maqsood
Bibliometric Analysis of Prostate Cancer and Deep Learning	Nihan ÖZBALTAN
Öneri Sistemlerinde Kişilik Özelliklerine Göre Performans ve Popülerlik Yanılgı Analizi	Tuğba Türkoğlu Kaya
Comparative Analysis of cVAE, cGAN, and LSTM Models for Music Generation Based on Weather Conditions	Nedim Karavdic, Becir Isakovic
Opportunities and Challenges of Using Artificial Intelligence in the Educational System	Inga Abuladze
Adapting Artificial Intelligence for Teaching Competency-Based courses: A framework for TVET Institutions	Walusansa Y. Yusuf , Adam A. Alli, Lwembawo Ibrahim, Magombe Yasin, Kasadha Juma
A Comparative Evaluation of Interpolation and Generative Oversampling Techniques for Predictive Maintenance	Abdazeez Atere, Hasan Kivrak
AI-Driven Financial Forecasting in Higher Education: A Case Study of the Islamic University in Uganda (IUIU)	Magombe Yasin, Adam A. Alli

Session 2. (HALL1)	
Chair: Ayşegül Özkan Tepe	
Date: June 19, 2023	
Time (GMT+3): 1:30 am - 3:30 pm	
Paper	Author (s)
Prediction of Carpal Tunnel Syndrome Using Machine Learning	Selçuk Çebi, Merve Aydın
Kalp Hastalığı Risk Tahmini için Makine Öğrenmesi Tabanlı Mobil Uygulama	Bartu Başaran, Ali Akdağ
Solving Distributed Job Shop Scheduling Problems Using Whale Optimization Algorithm with Encoding Schemes	Okan Uzunoğlu, Mehmet Akif Şahman, Sedat Korkmaz
Accurate and Scalable Object Detection for Smart Warehousing Using YOLOv8 and Residual CNNs	Iman Elawady, Abdulrahman Al Homsy, Omer Ahmed Mohamed Ahmed
Energy Loss and Panel Fault Detection in Solar photovoltaic Systems Using Extreme Gradient Boosting algorithm	Adem Atmaca, Fatma Zehra Kardaş
Numerical Analysis of a Simple Controller Mechanism for a Swimming Center Pattern Generator	Yavuz Cura, Nimet Korkmaz
Using bigdata in Enhancing Patient Preparedness for Surgical Procedures and Improving Business Process Management in Hospitals in low developed countries: A Case Study of Uganda.	Hamudani Sekizivu

Session 3. (HALL1)	
Chair: Sefa Enes Türkoğlu	
Date: June 20, 2025	
Time (GMT+3): 9:30 am - 11:30 am	
Paper	Author (s)
A Novel Deep Learning Model for Diabetes Diagnosis	Haniyeh FATTAHI, Yousef Farhang
A Deep Learning Framework for the Identification of Distinct Stages in Diabetic Retinopathy through Retinal Image Analysis	Dinul Rupasinghe, Kasun Samarawickrama
Attention-Augmented DenseNet Architectures with Feature Selection for High-Performance Image Classification	Murat CANAYAZ
Advanced Maritime Vessel Detection in Satellite Imagery Using Masati-V2	Keerthi Reddy Gudibandi, Venkata Sai Suchitha Sreeram, Sreenivasulu Chamarthi, Hajarathaiah Koduru
Brain Tumor Classification Using Fine-Tuned Transfer Learning	Mustafa Suban Dut, Meriç Çetin
Asenkron Motor Hız Tahmininde İnterpolasyon ve Eğri Uydurma Yöntemlerinin Kullanımı	Emrah Eser
IoT / PLC Based Low Consumption Washing Machine Control	Engin Oğuzay, Gökhan Uçkan
Ülkelerin Yolsuzluk Algısını Şekillendiren Faktörler: Dünya Mutluluk Endeksi ve Enflasyon Göstergelerinin Rolünün Açıklanabilir Yapay Zeka Yöntemleri ile İncelenmesi	Ensar Yılmaz, Burak Aktürk, Tolga Büyüktanır
A Framework for Artificial Intelligence Driven Business Model Innovation for Universities: A case of Islamic University in Uganda	Swabra Nakamanya, Adam A. Alli

Session 4. (HALL2)	
Chair: Okan Güder	
Date: June 20, 2025	
Time (GMT+3): 9:30 am - 11:30 am	
Paper	Author (s)
Study of FPGA – Based Spiking Neural Networks: Classification Implementation	Mehmet Sinan Çınaroğlu, Erol Seke
COVID-QU-Ex Görüntü Verisi ile CNN Tabanlı COVID-19 Sınıflandırmasında Derin Öğrenme Modellerinin Karşılaştırılması	Nihan ÖZBALTAN, Halil Erdem ÜNGÖR
A Conceptual Framework for AI-Assisted Monitoring in Microalgae Cultivation: A Case Study on Synechococcus elongatus PCC 3055	Betül Güroy, Derya Güroy, İzzet Şahin, Serhan Mantoğlu, Mustafa Rüçhan Pekcan
XAI-Powered Comparative Diabetes Prediction with XGBoost, SVM and Artificial Neural Networks	Furkan Sefa Demirci, Remzi Yıldırım
YAPAY ZEKA TEKNİKLERİ KULLANILARAK KÖTÜ AMAÇLI YAZILIMLARIN ANALİZİ VE GÜVENLİK AÇIKLARININ TESPİTİ	Ayat Faruk Swadı Swadı, Remzi Yıldırım
Bitki hastalıklarını tespit eden görüntü işleme sistemli mobil uygulama	Yiğitcan Soylu, Mustafa Altıok
A Comparative Evaluation of Blockchain Consensus Algorithms in Terms of Energy Efficiency and Performance Metrics	Doğukan ÇATAL, Mehtap KÖSE ULUKÖK
Detection of Solar Panel Defects via Thermal-Optical Image Fusion Using YOLOv11: An Embedded System-Based Approach	Emirhan Uysal, Enes Karanisoğlu, Furkan Hanlı, Mehmet Serhat Can

Session 5. (HALL1)Chair: Okan Güder	
Date: June 20, 2025	
Time (GMT+3): 2:00 pm - 4:00 pm	
Paper	Author (s)
Plotting of Generative AI-Images via Low-Cost Robotic Arm	Rıdvan Yayla
Comparative Analysis of Deep Learning Models for COVID-19 Detection in X-Ray Images	Ali Bayram, Nihan ÖZBALTAN
Deep Learning Approaches for Lung Cancer Classification: A Comparative Study of Multiple Model Architectures	Ayşe Nur Durmaz, Nihan ÖZBALTAN
Design and Comparative Analysis of Dual-Band Microstrip Antennas at 28/38 GHz Using FR-4 and Rogers 5880 Substrates	Bilal Okan İÇMEZ, Çetin KURNAZ
Sürdürülebilir Sokak Aydınlatması: Yüksek Basıncılı Sodyum Armatürlerden LED ve PV Destekli Sistemlere Geçişin Enerji ve Karbon Açısından Değerlendirilmesi	Şükrü Göksu, Yeliz Yoldaş Seven
An AI-Driven Drone-Integrated Mobile Photobioreactor System: A Novel Approach to Atmospheric Carbon Sequestration and Oxygen Emission	Betül Güroy
A Review of Artificial Intelligence Based Methods in Solar and Wind Energy Generation and Management	Emre Güler
Raft Tabanlı Alternatif Konsensüs Algoritmalarının Performans Analizi	Halil Ibrahim Yılmaz, Ahmet Coşkunçay
Multiple Object Detection and Tracking in Real-Time Aerial Imagery with Deep Learning Architectures	Betul Akyuz, Melih Bahadır, Özkan İnik

Session 6. (HALL2)	
Chair: Furkan Sefa Demirci	
Date: June 20, 2025	
Time (GMT+3): 2:00 pm - 4:00 pm	
Paper	Author (s)
Yapay Zeka Destekli Beyin Bilgisayarlı Tomografi Görüntülerinden Beyin Kanaması Tipi Lokalizasyonu ve Risk Seviyesi Testi Yaklaşımı	NECATİ OLGUN, MEDİNE ATMACA
A New Perspective on Managing Industrial Ovens with Intel x86 Based Microprocessors	Gökhan UÇKAN, Nedim Kurtuluş
Öğrenci Başarısının Makine Öğrenmesi ile Tahmini: UCI Öğrenci Performans Veri Seti Üzerine Karşılaştırmalı Bir Analiz	Abdulkadir Alabdullah, Yasemin Çetin Kaya
El Yazısı Karakterlerin Tanınmasında Derin Sinir Ağlarının Etkinliği Kısıtlı ve Geniş Sınıf Yapılarının Performans Analizi	Erdin Fidan, Mahir Kaya
AI-Based Blood Test Analysis Chatbot: Interpretation of Medical PDF Reports in Turkish	Sidal Deniz Bingöl, Damla Nur Alper
Yapay Zeka ve Doğal Dil İşleme ile Türkçe Metinlerden Siber Zorbalık Tespiti	Halid Buğra Gökdeniz, Pelin Canbay
Comparative Review of Machine Learning Methods in Revenue Forecasting	Ali Taghiyev, Özkan İnik