

Asst. Prof. Ertuğrul BAYRAKTAR

Personal Information

Fax Phone: [+90 212 383 2975](tel:+902123832975)

Email: eb@yildiz.edu.tr

Web: <https://avesis.yildiz.edu.tr/eb>

International Researcher IDs

ScholarID: LM_VCuoAAAAJ

ORCID: 0000-0002-7387-4783

Publons / Web Of Science ResearcherID: A-4705-2015

ScopusID: 57194083975

Yoksis Researcher ID: 29163

Education Information

Post Doctorate, Italian Institute of Technology, The Pattern Analysis and Computer Vision (PAVIS) , Visual Geometry and Modelling (VGM), Italy 2019 - 2020

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Mechatronics Engineering, Turkey 2013 - 2018

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Mechatronics Engineering, Turkey 2011 - 2013

Postgraduate, Kadir Has University, Institute Of Science, Finance Engineering, Turkey 2009 - 2011

Undergraduate, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, Turkey 2005 - 2009

Research Areas

Computer Vision, Computer Learning, Pattern Recognition and Image Processing, Neural Networks, System Dynamics and Control, Robotics, Mechatronics, Modeling and Simulation of Dynamic Systems

Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, 2021 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Visual detection and tracking of lane violations for heavy vehicles**
Mutlukaya I., Can Karakurt R., Cetinkaya S., BAYRAKTAR E.
Neural Computing and Applications, vol.36, no.36, pp.22633-22652, 2024 (SCI-Expanded)
- II. **Improving efficiency and cost of ordering algorithms in pathfinding using shell layers**
Allus A., Diab A. M., BAYRAKTAR E.
Expert Systems with Applications, vol.238, 2024 (SCI-Expanded)
- III. **Conditional-pooling for improved data transmission**
BAYRAKTAR E., Yigit C. B.
Pattern Recognition, vol.145, 2024 (SCI-Expanded)

- IV. **Traffic congestion-aware graph-based vehicle rerouting framework from aerial imagery**
BAYRAKTAR E., Korkmaz B. N., Erarslan A. U., Celebi N.
Engineering Applications of Artificial Intelligence, vol.119, 2023 (SCI-Expanded)
- V. **Improved object reidentification via more efficient embeddings**
BAYRAKTAR E.
Turkish Journal of Electrical Engineering and Computer Sciences, vol.31, no.2, pp.282-294, 2023 (SCI-Expanded)
- VI. **Fast re-OBJ: real-time object re-identification in rigid scenes**
Bayraktar E., Wang Y., Delbue A.
MACHINE VISION AND APPLICATIONS, vol.33, no.6, 2022 (SCI-Expanded)
- VII. **Similarity based person re-identification for multi-object tracking using deep Siamese network**
Suljagic H., Bayraktar E., Çelebi N.
NEURAL COMPUTING & APPLICATIONS, vol.34, no.20, pp.18171-18182, 2022 (SCI-Expanded)
- VIII. **External Force/Torque Estimation With Only Position Sensors for Antagonistic VSAs**
Yigit C. B., BAYRAKTAR E., Kaya O., Boyraz P.
IEEE TRANSACTIONS ON ROBOTICS, vol.37, no.2, pp.675-682, 2021 (SCI-Expanded)
- IX. **A low-cost UAV framework towards ornamental plant detection and counting in the wild**
Bayraktar E., Basarkan M. E., Celebi N.
ISPRS JOURNAL OF PHOTOGRAMMETRY AND REMOTE SENSING, vol.167, pp.1-11, 2020 (SCI-Expanded)
- X. **Object manipulation with a variable-stiffness robotic mechanism using deep neural networks for visual semantics and load estimation**
Bayraktar E., Yigit C. B., Boyraz P.
NEURAL COMPUTING & APPLICATIONS, vol.32, no.13, pp.9029-9045, 2020 (SCI-Expanded)
- XI. **A hybrid image dataset toward bridging the gap between real and simulation environments for robotics: Annotated desktop objects real and synthetic images dataset: ADORESet**
Bayraktar E., Yigit C. B., Boyraz P.
MACHINE VISION AND APPLICATIONS, vol.30, no.1, pp.23-40, 2019 (SCI-Expanded)
- XII. **Low-cost variable stiffness joint design using translational variable radius pulleys**
Yigit C. B., Bayraktar E., Boyraz P.
MECHANISM AND MACHINE THEORY, vol.130, pp.203-219, 2018 (SCI-Expanded)
- XIII. **Analysis of feature detector and descriptor combinations with a localization experiment for various performance metrics**
Bayraktar E., Boyraz P.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.25, no.3, pp.2444-2454, 2017 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Advanced Kalman Filter Optimization for Efficient Multi-Object Tracking in Computer Vision**
Bayraktar E.
2024 Innovations in Intelligent Systems and Applications Conference (ASYU), Ankara, Turkey, 16 - 18 October 2024, pp.1-6
- II. **Efficient and Reliable Surface Defect Detection in Industrial Products Using Morphology-Based Techniques**
Bayraktar E.
12th International Symposium on Intelligent Manufacturing and Service Systems, IMSS 2023, İstanbul, Turkey, 26 - 28 May 2023, pp.81-94
- III. **Meyve Bahçesinde Panorama Görüntülerden Derin Öğrenme Tabanlı Elma Tespiti Deep Learning Based Apple Detection from Panorama Images in the Orchard**
PAZARLI E., BAYRAKTAR E.
ELECO 2022, ELEKTRİK-ELEKTRONİK ve BİYOMEDİKAL MÜHENDİSLİĞİ KONFERANSI, Bursa, Turkey, 24

November 2022

IV. Combined GANs and Classical Methods for Surface Defect Detection

Bayraktar E., Tosun B., Altintas B., Celebi N.

2022 30th Signal Processing and Communications Applications Conference (SIU), Karabük, Turkey, 15 - 18 May 2022, pp.1-4

V. Visual Recognition of Objects with CNN and Object Manipulation

BAYRAKTAR E., YİĞİT C. B., BOYRAZ P.

2017 International Conference on Mechatronics Systems and Control Engineering (ICMSCE 2017), Kayseri, Turkey, 2 - 04 February 2017

VI. Tailoring the AI for robotics: Fine-tuning predefined deep convolutional neural network model for a narrower class of objects

BAYRAKTAR E., Yigit C. B., Boyraz P.

2017 International Conference on Mechatronics Systems and Control Engineering, ICMSCE 2017, Kayseri, Turkey, 2 - 04 February 2017, pp.10-14

VII. Robotic Arm Control By Fine-Tuned Convolutional Neural Network Model

Bayraktar E., Yigit C. B., Boyraz P.

25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017

Metrics

Publication: 21

Citation (WoS): 179

Citation (Scopus): 221

H-Index (WoS): 9

H-Index (Scopus): 9

Non Academic Experience

Canovate Endüstri Elektronik ve Mühendislik A.Ş.