

Asst. Prof. BURAK KALECİ

Personal Information

Email: burakkaleci@ogu.edu.tr

Web: <https://avesis.ogu.edu.tr/burakkaleci>

International Researcher IDs

ORCID: 0000-0002-2001-3381

ScopusID: 35409171900

Yoksis Researcher ID: 161259

Education Information

Doctorate, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Elektrik-Elektronik Anabilim Dalı, Turkey 2010 - 2016

Postgraduate, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Elektrik-Elektronik Mühendisliği (YI) (Tezli), Turkey 2008 - 2010

Undergraduate, Eskisehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, Turkey 2003 - 2008

Dissertations

Doctorate, İç ortamlarda anlamsal tabanlı keşif algoritmalarının geliştirilmesi, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Elektrik-Elektronik Anabilim Dalı, 2016

Postgraduate, Heterojen gezgin robot sistemleri için yeni bir market tabanlı görev paylaşırma yaklaşımı, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Elektrik-Elektronik Mühendisliği (YI) (Tezli), 2010

Research Areas

Electrical and Electronics Engineering

Academic Titles / Tasks

Assistant Professor, Eskisehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 2017 - Continues

Research Assistant, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Fen Bil.Enst.Md.Lüğü, 2011 - 2017

Courses

Doctorate

Robot Hareket Planlaması I, Doctorate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Postgraduate

SEMİNER, Postgraduate, 2021 - 2022

YÜKSEK LİSANS TEZ ÇALIŞMASI, Postgraduate, 2021 - 2022, 2020 - 2021

UZMANLIK ALAN DERSİ, Postgraduate, 2021 - 2022, 2020 - 2021

Undergraduate

Introduction To Programming, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018
Object Oriented Programming II, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019
Introduction To Programming, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018
Object Oriented Programming I, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020
Computer Programming, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017
Object Oriented Programming I, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020
Object Oriented Programming II, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019
Computer Programming, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017
ELECTRICAL ENGINEERING DESIGN, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018
ELECTRICAL ENGINEERING DESIGN, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018
Advanced Programming, Undergraduate, 2018 - 2019
Advanced Programming, Undergraduate, 2018 - 2019

Jury Memberships

Post Graduate, Post Graduate, Eskişehir Osmangazi Üniversitesi, October, 2018
Post Graduate, Post Graduate, Eskişehir Osmangazi Üniversitesi, May, 2018
Post Graduate, Post Graduate, Eskişehir Osmangazi Üniversitesi, April, 2018
Post Graduate, Post Graduate, Eskişehir Osmangazi Üniversitesi, June, 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **2DLaserNet: A deep learning architecture on 2D laser scans for semantic classification of mobile robot locations**
KALECİ B., TURGUT K., DUTAĞACI H.
Engineering Science and Technology, an International Journal, vol.28, 2022 (SCI-Expanded)
- II. **Semantic classification of mobile robot locations through 2D laser scans**
Kaleci B., Senler C. M., Dutağacı H., Parlaktuna O.
INTELLIGENT SERVICE ROBOTICS, vol.13, pp.63-85, 2020 (SCI-Expanded)
- III. **Performance analysis of bid calculation methods in multirobot market-based task allocation**
KALECİ B., PARLAKTUNA O.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.21, no.2, pp.565-585, 2013 (SCI-Expanded)
- IV. **MARKET-BASED MULTI-ROBOT TASK ALLOCATION USING ENERGY-BASED BID CALCULATIONS**
KALECİ B., PARLAKTUNA O.
INTERNATIONAL JOURNAL OF ROBOTICS & AUTOMATION, vol.27, no.4, pp.396-410, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **COMPARISON OF DEEP LEARNING TECHNIQUES FOR DETECTION OF DOORS IN INDOOR ENVIRONMENTS**
Kaleci B., Turgut K.
Eskişehir Osmangazi Üniversitesi Mühendislik ve Mimarlık Fakültesi Dergisi, vol.29, no.3, pp.396-412, 2021 (Peer-Reviewed Journal)
- II. **A Comparative Study of Point-Based Deep Learning Techniques for Semantic Classification in Search and Rescue Arenas**
Turgut K., Kaleci B.

International Journal of Advances in Engineering and Pure Sciences, vol.33, no.57, pp.57-66, 2021 (Peer-Reviewed Journal)

- III. **A Mobile Robot Application for Constructing Semantic and Metric Maps of Search and Rescue Arenas with Point-Based Deep Learning**
Kocaoğlu M., Işıkdemir Y. E., Uzun M. A., Taş M. O., Turgut K., Kaleci B.
Journal of Scientific, Technology and Engineering Research, vol.2, no.1, pp.11-22, 2021 (Peer-Reviewed Journal)
- IV. **İç Ortamlarda Robot Konumlarının Anlamsal Sınıflandırılması için 2B Lazer Verisi ile PointNet Uygulaması**
TURGUT K., KALECİ B.
Uluslararası Doğu Anadolu Fen Mühendislik ve Tasarım Dergisi, vol.2, no.2, pp.229-246, 2020 (Peer-Reviewed Journal)
- V. **A Comparative Study for Indoor Planar Surface Segmentation via 3D Laser Point Cloud Data**
Erucar E. E., Yılmaz M., Yılmaz B., Akbulut O., TURGUT K., KALECİ B.
Black Sea Journal of Engineering and Science, vol.3, no.4, pp.128-137, 2020 (Peer-Reviewed Journal)
- VI. **NOKTA BULUTU VERİSİ İLE KURAL TABANLI AÇIK KAPI BULMA YÖNTEMİ**
KALECİ B., TURGUT K.
Eskişehir Osmangazi Üniversitesi Mühendislik ve Mimarlık Fakültesi Dergisi, vol.28, no.2, pp.164-173, 2020 (Peer-Reviewed Journal)
- VII. **A PointNet Application for Semantic Classification of Ramps in Search and Rescue Arenas**
TURGUT K., KALECİ B.
International Journal of Intelligent Systems and Applications in Engineering, vol.7, no.3, pp.159-165, 2019 (Peer-Reviewed Journal)
- VIII. **Mobile Robot Localization via Outlier Rejection in Sonar Range Sensor Data**
YILMAZ S., Kayir H. E., KALECİ B., PARLAKTUNA O.
ISTANBUL UNIVERSITY-JOURNAL OF ELECTRICAL AND ELECTRONICS ENGINEERING, vol.12, no.1, pp.1457-1464, 2012 (ESCI)

Papers Published in Refereed Scientific Meetings

- I. **LiDAR- BASED SLAM USING INTRINSIC SHAPE SIGNATURE FEATURES**
Mezjini D., Kaleci B.
12. INTERNATIONAL SUMMIT SCIENTIFIC RESEARCH CONGRESS, Gaziantep, Turkey, 29 - 31 May 2024, pp.546-547
- II. **A USER-FRIENDLY EVALUATION TOOL FOR POINT CLOUD CLASSIFICATION AND SEGMENTATION**
Erdoğan M. F., Kaleci B.
II. INTERNATIONAL HAZAR SCIENTIFIC RESEARCHES CONFERENCE, Baku, Azerbaijan, 10 - 12 April 2021, vol.1, pp.841-852
- III. **Arama ve Kurtarma Alanlarındaki Rampaların Anlamsal Sınıflandırması için Derin Öğrenme Tekniklerinin Karşılaştırılması**
TURGUT K., KALECİ B.
ASYU 2020 Akıllı Sistemlerde Yenilikler ve Uygulamaları Konferansı, Turkey, 15 - 17 October 2020
- IV. **Düzensiz Nokta Bulutu Verileri için Sekizli Ağaç Veri Yapısı ile Ayır ve Birleştir Tabanlı Düzlem Bölütleme Yöntemi**
Yılmaz M., Erucar E. E., Yılmaz B., Akbulut O., TURGUT K., KALECİ B.
ASYU 2020 Akıllı Sistemlerde Yenilikler ve Uygulamaları Konferansı, Turkey, 15 - 17 October 2020
- V. **A Mobile Robot Application for 3D Obstacle Avoidance with Multi-Layer Vector Field Histogram**
Erdoğan E., Karaca M., KALECİ B.
International Conference On Access To Recent Advances In Engineering And Digitalization, 5 - 07 March 2020
- VI. **Semantic Place Classification of 2D Laser Data with A Simple Deep Learning Architecture**
TURGUT K., KALECİ B.

International Conference On Access To Recent Advances In Engineering And Digitalization, 5 - 07 March 2020

VII. **Plane Segmentation of Point Cloud Data Using Split and Merge Based Method**

KALECİ B., TURGUT K.

IEEE3rd International Symposium on Multidisciplinary Studies and Innovative Technologies, 11 - 13 October 2019

VIII. **A Deep Learning Architecture for Place Classification in Indoor Environment via 2D Laser Data**

TURGUT K., KALECİ B.

IEEE3rd International Symposium on Multidisciplinary Studies and Innovative Technologies, 11 - 13 October 2019

IX. **İç Ortamlarda Nokta Bulutu Kullanılarak Bakış Açısı Öznitelik Histogramı Tabanlı Nesne Sınıflandırma**

caran f., Tuğrul G., Güven Ü., TURGUT K., KALECİ B.

OTOMATİK KONTROL TÜRK MİLLİ KOMİTESİ ULUSAL TOPLANTISI, Turkey, 11 - 14 September 2019

X. **Nokta Bulutu Verisi için Ayır ve Birleştir Tabanlı Düzlem Bölütleme Yöntemi**

Cangür M. C., Çilce Y., Karadağ M. A., TURGUT K., KALECİ B.

OTOMATİK KONTROL TÜRK MİLLİ KOMİTESİ ULUSAL TOPLANTISI, Turkey, 11 - 14 September 2019

XI. **İç Ortamlarda 2B Lazer Verisi Kullanılarak Çok-Katmanlı Algılayıcılar ile Konum Sınıflandırma**

KALECİ B., TURGUT K.

OTOMATİK KONTROL TÜRK MİLLİ KOMİTESİ ULUSAL TOPLANTISI, Turkey, 11 - 14 September 2019

XII. **A Mobile Robot Application for 3D Object Classification via Point Cloud Data in Indoor Environment**

caran f., tuğrul g., güven ü., TURGUT K., KALECİ B.

International Congress on HumanComputer Interaction, Optimization and Robotic Applications, 5 - 07 July 2019

XIII. **3B Nokta Bulutu Verisi ile Bölge Büyütme Tabanlı Kapı Bulma Uygulaması**

bayram k., kolaylı b., solak a., tatar b., TURGUT K., KALECİ B.

Türkiye Robotbilim Konferansı 2019, Turkey, 26 - 28 June 2019

XIV. **A Comparative Study for Topological Map Construction Methods from Metric Map**

KALECİ B., PARLAKTUNA O., GÜREL U.

26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018

XV. **Spektral Kümeleme Yöntemi ile Metrik Haritadan Topolojik Harita Oluşturma**

KALECİ B., Şenler Ç. M., PARLAKTUNA O., GÜREL U.

2. Türkiye Robotbilim Konferansı (ToRK), Turkey, 26 - 27 October 2015

XVI. **Bina İçi Ortamlarda Lazer Mesafe Verisi Kullanarak Kural Tabanlı Kapı Bulma**

KALECİ B., Şenler Ç. M., DUTAĞACI H., PARLAKTUNA O.

2. Türkiye Robotbilim Konferansı (ToRK), Turkey, 26 - 27 October 2015

XVII. **Constructing Topological Map from Metric Map Using Spectral Clustering**

KALECİ B., Senler C. M., PARLAKTUNA O., GÜREL U.

27th IEEE International Conference on Tools with Artificial Intelligence (ICTAI), Vietri sul Mare, Italy, 9 - 11 November 2015, pp.139-145

XVIII. **Rule-Based Door Detection Using Laser Range Data in Indoor Environments**

KALECİ B., Senler C. M., DUTAĞACI H., PARLAKTUNA O.

27th IEEE International Conference on Tools with Artificial Intelligence (ICTAI), Vietri sul Mare, Italy, 9 - 11 November 2015, pp.510-517

XIX. **A Probabilistic Approach for Semantic Classification Using Laser Range Data in Indoor Environments**

Kaleci B., Senler C. M., Dutağacı H., Parlaktuna O.

International Conference on Advanced Robotics (ICAR), İstanbul, Turkey, 27 - 31 July 2015, pp.375-381

XX. **Mobile robot localization via outlier rejection in sonar range sensor data**

Yılmaz S., Ezercan Kayır H. H., Kaleci B., Parlaktuna O.

2011 7th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 1 - 04 December 2011, vol.2, pp.434-438

XXI. **Atama Problemini Kullanan Market Tabanlı Görev Paylaştırma Algoritması**

KALECİ B., KİRLİK G., PARLAKTUNA O., ÖZKAN M.

Ulusal Otomatik Kontrol Toplantısı (TOK 2010), Kocaeli, Turkey, 21 - 23 September 2010, pp.380-385

XXII. **Parçacık Süzgeci Tabanlı Konumlandırma Yöntemi için Yeni Bir Algılayıcı Modeli**

YILMAZ S., EZERCAN KAYIR H. H., KALECİ B., PARLAKTUNA O.

Otomatik Kontrol Türk Milli Komitesi – Otomatik Kontrol Ulusal Toplantısı, Gebze-Kocaeli, Turkey, 21 - 23 September 2010, pp.298-303

- XXIII. **Market Based Task Allocation Method Using Exploratory Learning for Heterogeneous Multi Robot Team**
KALECİ B., PARLAKTUNA O., ÖZKAN M.
International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2010), Kayseri, Turkey, 21 - 24 June 2010, pp.481-485
- XXIV. **Repealing Range Sensor Model Approach for Particle Filter Based Mobile Robot Localization Using Sonar Data**
YILMAZ S., EZERCAN KAYIR H. H., KALECİ B., PARLAKTUNA O.
International Symposium on INnovations in Intelligent SysTems and Applications, Kayseri, Turkey, 21 - 24 June 2010, pp.476-480
- XXV. **An Application on Line and Corner Detection Method by Using Laser Beams**
Demir G., YILMAZ S., EZERCAN KAYIR H. H., KALECİ B., YAZICI A., PARLAKTUNA O.
1st International Symposium on Computing in Science and Engineering, 3 - 05 June 2010
- XXVI. **A New Task Reintroduction Approach for Market Based Task Allocation**
KALECİ B., PARLAKTUNA O., ÖZKAN M.
The 1st International Symposium on Computing in Science & Engineering (ISCSE), Aydın, Turkey, 3 - 05 June 2010, pp.498-505
- XXVII. **Market-Based Task Allocation by using Assignment Problem**
KALECİ B., PARLAKTUNA O., ÖZKAN M., Kirlik G.
IEEE International Conference on Systems, Man and Cybernetics, İstanbul, Turkey, 10 - 13 October 2010
- XXVIII. **A New Sensor Model for Particle-Filter Based Localization in the Partially Unknown Environments**
YILMAZ S., Kayir H. E., KALECİ B., PARLAKTUNA O.
IEEE International Conference on Systems, Man and Cybernetics, İstanbul, Turkey, 10 - 13 October 2010
- XXIX. **A New Approach to Improve the Success Ratio and Localization Duration of a Particle Filter Based Localization for Mobile Robots**
YILMAZ S., KALECİ B., EZERCAN KAYIR H. H., PARLAKTUNA O.
6th International Conference On Electrical and Electronics Engineering, Bursa, Turkey, 5 - 08 November 2009, vol.2, pp.370-374
- XXX. **Gezgin Robotlarda Parçacık Süzgeci Tabanlı Konumlandırma ve Seyrüsefer Yöntemi**
YILMAZ S., EZERCAN KAYIR H. H., KALECİ B., PARLAKTUNA O.
Otomatik Kontrol Türk Milli Komitesi – Otomatik Kontrol Ulusal Toplantısı, İstanbul, Turkey, 13 - 16 October 2009, pp.354-359
- XXXI. **Gezgin Robotlarda Parçacık Süzgeci Tabanlı Konumlandırma Yönteminde Algılayıcı Veri Hassasiyeti Analizi**
YILMAZ S., EZERCAN KAYIR H. H., KALECİ B., PARLAKTUNA O.
Elektrik, Elektronik, Bilgisayar, Biyomedikal Mühendisliği 13. Ulusal Kongresi, Ankara, Turkey, 23 - 26 December 2009, pp.145-150
- XXXII. **Gezgin Robotlar için Çok Kameralı Konumlandırma Sistemi**
DOBRUCALI O., YUFKA A., KALECİ B., ÖZKAN M., PARLAKTUNA O.
Elektrik-Elektronik ve Bilgisayar Muhendisligi Sempozyumu (ELECO 2008), Bursa, Turkey, 26 - 30 November 2008
- XXXIII. **Gezgin Robotlar için Görüntü Tabanlı Konumlandırma Sistemi**
YUFKA A., DOBRUCALI O., KALECİ B., ÖZKAN M., PARLAKTUNA O.
Otomatik Kontrol Ulusal Toplantısı (TOK'08), İstanbul, Turkey, 13 - 15 November 2008, pp.47-51
- XXXIV. **Tepe Kamera ile İç Ortamda Gezgin Robotların Konumlandırılması**
KALECİ B., ÇAKIR Y., ÖZKAN M., PARLAKTUNA O.
Akıllı Sistemlerde Yenilikler ve Uygulamaları Sempozyumu (ASYU 2008), Isparta, Turkey, 19 - 21 June 2008, pp.106-110

Supported Projects

ÖZKAN M., KALECİ B., ELİBOL SEÇİL G., BEKGÖZ B. O., SEÇİL S., Project Supported by Higher Education Institutions, İnsansız Hava Araçları ile Kapalı Ortamlarda Eş Zamanlı Konumlandırma ve Haritalama, 2024 - Continues

Özkan M., Kaleci B., Elibol Seçil G., Seçil S., Yazıcı A., TUBITAK Project, Çok Parçalı Yapıların Kalite Denetimine Yönelik Otonom Robotik Denetleme Yöntemi Geliştirilmesi, 2022 - 2025

Dutağacı H., Kaleci B., Yılmaz S., Gürel U., Project Supported by Higher Education Institutions, Deprem Sonrası Bina İçi Ortamlarda Kara ve Hava Robotları Kullanılarak Keşif ve Haritalama, 2014 - 2017

PARLAKTUNA O., KALECİ B., Project Supported by Higher Education Institutions, İç Ortamlarda Anlamsal Tabanlı Keşif Algoritmalarının Geliştirilmesi Bina İçi Afet Ortamlarında Keşif ve Haritalama, 2015 - 2016

Peer Reviews in Scientific Publications

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, January 2020

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, December 2019

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, April 2019

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, January 2019

IEEE TRANSACTIONS ON INDUSTRIAL INFORMATICS, Journal Indexed in SCI-E, March 2018

IEEE ACCESS, Journal Indexed in SCI-E, February 2018

IEEE TRANSACTIONS ON INDUSTRIAL INFORMATICS, Journal Indexed in SCI-E, February 2018

IEEE TRANSACTIONS ON CYBERNETICS, SCI Journal, December 2017

INTERNATIONAL JOURNAL OF INTELLIGENT SYSTEMS, Journal Indexed in SCI-E, November 2017

INTERNATIONAL JOURNAL OF INTELLIGENT SYSTEMS, Journal Indexed in SCI-E, October 2017

IEEE TRANSACTIONS ON CYBERNETICS, SCI Journal, August 2017

INTERNATIONAL JOURNAL OF INTELLIGENT SYSTEMS, Journal Indexed in SCI-E, July 2017

IEEE TRANSACTIONS ON SYSTEMS MAN CYBERNETICS-SYSTEMS, SCI Journal, July 2017

IEEE TRANSACTIONS ON CYBERNETICS, SCI Journal, June 2017

Anadolu University Journal of Science and Technology A- Applied Sciences and Engineering, Other Indexed Journal, June 2017

Anadolu University Journal of Science and Technology A- Applied Sciences and Engineering, Other Indexed Journal, June 2017

IEEE ACCESS, Journal Indexed in SCI-E, May 2017

IEEE ACCESS, Journal Indexed in SCI-E, March 2017

IEEE TRANSACTIONS ON CYBERNETICS, SCI Journal, February 2017

Scientific Project Refereeing

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, July 2020

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, February 2020

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, July 2018

Metrics

Publication: 46

Citation (WoS): 32

Citation (Scopus): 80

H-Index (WoS): 4

H-Index (Scopus): 6

Non Academic Experience

Eskişehir Osmangazi Üniversitesi, Araştırma Görevlisi