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MERCİMEK**

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Publons / Web Of Science

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Education

Doctorate
2006 - 2013

The University Of Tennessee - Knoxville, College Of Engineering, Electrical
Engineering, United States Of America

Postgraduate
2001 - 2003

Yildiz Technical University, Elektrik Elektronik Fakültesi, Fen Bilimleri Enstitüsü,
Turkey

Undergraduate
1997 - 2001

Yildiz Technical University, Elektrik Elektronik Fakültesi, Elektronik Haberleşme
Mühendisliği, Turkey

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Motion segmentation aided super resolution image reconstruction, The University of Tennessee, Knoxville,
2013

Postgraduate, Yapay sinir ağlarıyla 3-D bilgisayar görmesi, Yıldiz Technical University, Faculty of Electrical & Electronics,
Electronics And Communication Engineering, 2003

Academic Titles / Tasks

Supported Projects

1. Kaymakçı Ö. T., Mercimek M., Öz M. A. N., TUBITAK Project, Kumaş Hatalarının Endüstriyel Görüntü İşleme Teknikleri ile Tanılanması, 2018 - 2020
2. Onat C., Mercimek M., Talu M. F., TUBITAK Project, Investigation of Relationship Between Flame Form and Combustion Efficiency in Automatically Feeding Coal Boilers, 2014 - 2015

Published journal articles indexed by SCI, SSCI, and AHCI

1. **Anomaly localization in regular textures based on deep convolutional generative adversarial networks**
Öz M. A. N., Mercimek M., Kaymakçı Ö. T.
Applied Intelligence, vol.52, no.2, pp.1556-1565, 2022 (SCI-Expanded)
2. **A NESTED AUTOENCODER APPROACH TO AUTOMATED DEFECT INSPECTION ON TEXTURED SURFACES**
Öz M. A. N., Kaymakçı Ö. T., Mercimek M.
INTERNATIONAL JOURNAL OF APPLIED MATHEMATICS AND COMPUTER SCIENCE, vol.31, no.3, pp.515-523, 2021 (SCI-Expanded)
3. **Clustered Exact Daum-Huang Particle Flow Filter**
Örenbaş H., Mercimek M.
Mathematical Problems in Engineering, vol.2019, 2019 (SCI-Expanded)
4. **A new method for the registration of three-dimensional point-sets: The Gaussian Fields framework**
Boughorbel F., Mercimek M., Koschan A., Abidi M.
Image and Vision Computing, vol.28, pp.124-137, 2010 (SCI-Expanded)
5. **3D scanning transmission electron microscopy for catalysts: Imaging and data analysis**
Borisevich A., Lupini A., Koschan A., Mercimek M., Abidi M., Pennycook S.
Microscopy and Microanalysis, vol.14, pp.168-169, 2008 (SCI-Expanded)
6. **Real object recognition using moment invariants**
Mercimek M., Gulez K., Mumcu T.
SADHANA-ACADEMY PROCEEDINGS IN ENGINEERING SCIENCES, vol.30, pp.765-775, 2005 (SCI-Expanded)
7. **Switching Control of an AC/DC Converter by Neural Networks**
Mumcu T. V., Gulez K., Mercimek M.
INTERNATIONAL JOURNAL OF INFORMATION TECHNOLOGY, vol.11, no.5, pp.78-86, 2005 (SCI-Expanded)
8. **3D real object recognition on the basis of moment invariants and neural networks**
MERCİMEK M., Gulez K.
COMPUTER AND INFORMATION SCIENCES - ISCIS 2004, PROCEEDINGS, vol.3280, pp.410-419, 2004 (SCI-Expanded)

Articles Published in Other Journals

1. **Automated fabric inspection system development aided with convolutional autoencoder-based defect detection**
Mercimek M., Öz M. A. N., Kaymakçı Ö. T.

- Niğde Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.13, no.4, pp.1100-1114, 2024 (Peer-Reviewed Journal)
2. **Position Control Using Trajectory Tracking and State Estimation of a Quad-rotor**
MERCİMEK M., SARIPINAR O.
Çanakkale Onsekiz Mart Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.9, no.4, pp.1005-1019, 2023 (Peer-Reviewed Journal)
 3. **A COMPARATIVE STUDY ON DATA PRE-PROCESSING TECHNIQUES FOR REMAINING USEFUL LIFE PREDICTION OF TURBOFAN ENGINES**
Erdoğan M., Mercimek M.
The International Journal of Materials and Engineering Technology, vol.6, no.2, pp.50-58, 2023 (Non Peer-Reviewed Journal)
 4. **Fiducial Markers Aided Position Estimation for Vertical Landing**
Şahin R. B., Mercimek M.
The European Journal of Research and Development , vol.3, no.2, pp.29-45, 2023 (Peer-Reviewed Journal)
 5. **Image future extraction using dynamic neural network**
UÇAN O. N., BAL A., MERCİMEK M.
Istanbul University Journal of Electrical and Electronics Engineering, vol.2, no.2, pp.537-539, 2002 (Peer-Reviewed Journal)

Papers Published in Refereed Scientific Meetings

1. **Attack Path Analysis and Security Concept Design for OTA Enabled Electric Power Steering System**
Subaşı E., MERCİMEK M.
2024 Innovations in Intelligent Systems and Applications Conference, ASYU 2024, Ankara, Turkey, 16 - 18 October 2024
2. **Enhancing Visual Odometry Accuracy through Block-Based Techniques**
Atılğan C., MERCİMEK M.
2024 Innovations in Intelligent Systems and Applications Conference, ASYU 2024, Ankara, Turkey, 16 - 18 October 2024
3. **Investigation of Cyber Attack Sources in Fully Autonomous Vehicles**
Subaşı E., Mercimek M.
TOK'2023 24.Otomatik Kontrol Ulusal Toplantısı, İstanbul, Turkey, 14 - 16 September 2023, pp.414-419
4. **Döner Kanatlı İnsansız Hava Araçlarının Görme Tabanlı Derin Pekiştirmeli Öğrenme Yöntemi ile Otonom İnişi**
Öztürk A., Çakır H. S., Mercimek M., Engin Ş. N.
OTOMATİK KONTROL TÜRK MİLLİ KOMİTESİ ULUSAL TOPLANTISI (TOK2022) , Elazığ, Turkey, 15 - 18 September 2022, pp.1-6
5. **Vision-Based Position Estimation with Markers For Quadrotors**
Uzunoglu M., Sahin R. B., MERCİMEK M.
4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, HORA 2022, Ankara, Turkey, 9 - 11 June 2022
6. **Split-Brain Autoencoder Approach for Surface Defect Detection**
Ulutas T., ÖZ M. A. N., MERCİMEK M., KAYMAKÇI Ö. T.
2nd International Conference on Electrical, Communication and Computer Engineering, ICECCE 2020, İstanbul, Turkey, 12 - 13 June 2020
7. **Advanced Predictive Maintenance with Machine Learning Failure Estimation in Industrial Packaging Robots**
Koca O., Kaymakçı Ö. T., Mercimek M.
15th International Conference on Development and Application Systems (DAS), Suceava, Romania, 21 - 23 May 2020, pp.1-6

8. **Intelligent methods on increasing the quality of higher education**
Mercimek M., Yıldırım T.
International Conference on Innovation in Higher Education (IJIHE), Kyyiv, Ukraine, 16 - 19 May 2003, pp.1-4
9. **An investigation of registration methods on the images degraded by atmospheric turbulence**
GEZER G., MERCİMEK M.
6th International Conference on Control Engineering and Information Technology, CEIT 2018, İstanbul, Turkey, 25 - 27 October 2018
10. **Design and implementation of real time face tracking humanoid robot**
Cilmi B., MERCİMEK M.
6th International Conference on Control Engineering and Information Technology, CEIT 2018, İstanbul, Turkey, 25 - 27 October 2018
11. **Internet Based Smart Home Automation Application Using Microcomputer**
Özkaya A., Mercimek M.
International Technological Sciences and Design Symposium, Giresun, Turkey, 27 - 29 June 2018, vol.1, no.1, pp.1-4
12. **Spatial Codependency Adaptations for Super Resolution Image Reconstruction**
Mercimek M., Örenbaş H.
8th International Conference on Image Processing, Wavelet and Applications,, İstanbul, Turkey, 22 - 24 September 2016, pp.1-9
13. **Information Complexity Aided Statistical Background Modeling in Surveillance Applications**
Mercimek M., Bozdogan H., Koschan A., Abidi M. A.
International Conference on Information Complexity and Statistical Modeling in High Dimensions with Applications (IC-SMHD-2016), Nevşehir, Turkey, 18 - 21 May 2016, pp.1-15
14. **Improving 3D Reconstruction from STEM Data**
Koschan A. F., Mercimek M., Abidi M. A., Borisevich A. Y., Lupini A. R., Pennycook S. J.
Microscopy Society of America, Florida, United States Of America, 5 - 09 August 2007, vol.13, pp.1664-1665
15. **Comparison of Switching Elements in an AC/DC Converter by Neural Networks for Line Harmonic Currents**
Mumcu T. V., Mercimek M., Gulez K.
International Conference on Intelligent Computing, Hefei, China, 23 - 26 August 2005, pp.540-549
16. **Bir Hidrolik Sistemin Yapay Sinir Ağları Temelli Konum Kontrolü**
Mercimek M., Akkaya A. V.
Akıllı Sistemlerde Yenilikler ve Uygulamaları , İstanbul, Turkey, 23 June 2004 - 25 June 2005, pp.175-178

Academic and Administrative Experience

| | | |
|------------------|----------------------------------|------------------------------------------------------------------------------------------------------|
| 2018 - Continues | Deputy Head of Department | Yildiz Technical University, Faculty of Electrical & Electronics, Control And Automation Engineering |
| 2014 - 2016 | Deputy Head of Department | Yildiz Technical University, Faculty of Electrical & Electronics, Control And Automation Engineering |

Supervised Theses

Mercimek M., Dikey iniş için görsel referans işaretçileri destekli pozisyon kestirimi, Postgraduate, R.BEHLÜL(Student), 2023

Mercimek M., Dikey iniş kalkışlı insansız hava araçları için görsel işaretleyici sistemler ile görüntü tabanlı konum kestirimi, Postgraduate, M.UZUNOĞLU(Student), 2022

Mercimek M., Kaymakçı Ö. T., Endüstriyel ürünlerin yüzey kusurlarının görüntü işleme ile algılanması ve tanımlanması, Doctorate, M.ALİ(Student), 2022

Mercimek M., Kumaş yüzeylerinde ayırık beyinli oto kodlayıcı temelli görsel hata tespiti, Postgraduate, T.ULUTAŞ(Student), 2020

Mercimek M., Uzak mesafeli görüntüleme bozulmalarının incelenmesi ve iyileştirilmesi, Doctorate, G.GEZER(Student), 2020

Mercimek M., Konumlandırma ve Haritalama Algoritmalarında Makine Öğrenmesi ve Parçacık Filtrelerinin Kullanılması, Doctorate, H.ÖRENBAŞ(Student), 2019

Mercimek M., Mini bilgisayar kullanılarak internet tabanlı ev otomasyonu uygulaması, Postgraduate, A.ÖZKAYA(Student), 2018

Mercimek M., GÖRÜNÜR IŞIK İLE HABERLEŞME VE SİSTEM TASARIMI, Postgraduate, A.DORUK(Student), 2016

Scientific Project Refereeing

TUBITAK Project, 1512 - Progressive Support Program for Entrepreneurship, June 2019

TUBITAK Project, 1512 - Progressive Support Program for Entrepreneurship, May 2019

Scientific Research / Working Group Memberships

Iris (Imaging, Robotics, And Intelligent Systems) Laboratory, The University of Tennessee, Amerika Birleşik Devletleri, <https://www.imaging.utk.edu/>, 2005 - 2013

Metrics

Publication: 30

Citation (WoS): 88

Citation (Scopus): 152

H-Index (WoS): 4

H-Index (Scopus): 4

Research Areas

Information Systems, Communication and Control Engineering, Robotics and Mechatronics Systems, Route and Motion Planning, Signal Processing, Image and Video Processing, Computer Sciences, Computer Vision, Computer Vision, Artificial Intelligence, Computer Learning and Pattern Recognition, Pattern Recognition and Image Processing, Engineering and Technology

Non Academic Experience

The University of Tennessee - Knoxville, ABD, Araştırma Görevlisi