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Education Information

Doctorate, Bogazici University, Institute Of Science, Elektrik-Elektronik Mühendisliği (Yl) (Tezli), Turkey 2010 - 2014
Undergraduate, Bogazici University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1994 - 1999
Postgraduate, Bogazici University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1994 - 1999

Dissertations

Doctorate, Object recognition in subspaces: Applications in biometry and 3D model retrieval, Bogazici University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Yl) (Tezli), 2009
Postgraduate, Statistical language models for large vocabulary Turkish speech recognition, Bogazici University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2002

Research Areas

Computer Sciences, Computer Vision, 3D Impressions, Computer Vision, Artificial Intelligence, Computer Learning and Pattern Recognition, Pattern Recognition and Image Processing, Neural Networks, Electrical and Electronics Engineering, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Eskisehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 2011 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Local region-learning modules for point cloud classification**
TURGUT K., DUTAĞACI H.
MACHINE VISION AND APPLICATIONS, vol.35, no.1, 2024 (SCI-Expanded)

II. **Ordinalysis: Interpretability of multidimensional ordinal data**
Zine-El-Abidine M., DUTAĞACI H., Rousseau D.

SoftwareX, vol.22, 2023 (SCI-Expanded)

III. **Using t-distributed stochastic neighbor embedding for visualization and segmentation of 3D point clouds of plants**
DUTAĞACI H.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.31, no.5, pp.792-813, 2023 (SCI-Expanded)

IV. **Segmentation of structural parts of rosebush plants with 3D point-based deep learning methods**
TURGUT K., DUTAĞACI H., Galopin G., Rousseau D.
Plant Methods, vol.18, no.1, 2022 (SCI-Expanded)

V. **Surface profile-guided scan method for autonomous 3D reconstruction of unknown objects using an industrial robot**
Özkan M., Seçil S., Turgut K., Dutağacı H., Uyanik C., Parlaktuna O.
Visual Computer, vol.38, no.11, pp.3953-3977, 2022 (SCI-Expanded)

VI. **RoseSegNet: An attention-based deep learning architecture for organ segmentation of plants**
TURGUT K., DUTAĞACI H., Rousseau D.
BIOSYSTEMS ENGINEERING, vol.221, pp.138-153, 2022 (SCI-Expanded)

VII. **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)

VIII. **Assigning apples to individual trees in dense orchards using 3D colour point clouds**
Zine-El-Abidine M., Dutağacı H., Galopin G., Rousseau D.
Biosystems Engineering, vol.209, pp.30-52, 2021 (SCI-Expanded)

IX. **ROSE-X: an annotated data set for evaluation of 3D plant organ segmentation methods**
Dutagaci H., Rasti P., Galopin G., Rousseau D.
PLANT METHODS, vol.16, no.1, 2020 (SCI-Expanded)

X. **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)

XI. **Evaluation of 3D interest point detection techniques via human-generated ground truth**
Dutağacı H., Cheung C. P., Godil A.
VISUAL COMPUTER, vol.28, pp.901-917, 2012 (SCI-Expanded)

XII. **Subspace methods for retrieval of general 3D models**
Dutagaci H., Sankur B., Yemez Y.
COMPUTER VISION AND IMAGE UNDERSTANDING, vol.114, pp.865-886, 2010 (SCI-Expanded)

XIII. **Representation plurality and fusion for 3-D face recognition**
Goekberk B., Dutagaci H., Ulas A., Akarun L., Sankur B.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART B-CYBERNETICS, vol.38, pp.155-173, 2008 (SCI-Expanded)

XIV. **Comparative analysis of global hand appearance-based person recognition**
Dutagaci H., Sankur B., Yoruk E.
JOURNAL OF ELECTRONIC IMAGING, vol.17, 2008 (SCI-Expanded)

XV. **A unified language model for large vocabulary continuous speech recognition of Turkish**
Arisoy E., Dutagaci H., Arslan L. M.
SIGNAL PROCESSING, vol.86, pp.2844-2862, 2006 (SCI-Expanded)

XVI. **Hand biometrics**
Yoeruek E., Dutagaci H., Sankur B.
IMAGE AND VISION COMPUTING, vol.24, pp.483-497, 2006 (SCI-Expanded)

Articles Published in Other Journals

I. **Transfer learning from indoor to outdoor in cultivar testing: application to russeting detection**
El Abidine M. Z., DUTAĞACI H., Rousseau D.
Acta Horticulturae, vol.1360, pp.245-251, 2023 (Scopus)

II. **Automatic apple detection in orchards with computer vision and machine learning**
El Abidine M. Z., Ahmad A., DUTAĞACI H., Rousseau D.
Acta Horticulturae, vol.1360, pp.45-51, 2023 (Scopus)

Papers Published in Refereed Scientific Meetings

I. **Toward Objective Variety Testing Score Based on Computer Vision and Unsupervised Machine Learning: Application to Apple Shape**
Zine-El-Abidine M., DUTAĞACI H., Rasti P., Aranzana M. J., Dujak C., Rousseau D.
4th International Conference on Image Processing and Vision Engineering, IMPROVE 2024, Angers, France, 2 - 04 May 2024, pp.15-22

II. **Robustness of 3D point-based deep learning for plant organ segmentation against point density variation and noise**
TURGUT K., DUTAĞACI H., Rousseau D.
North American Plant Phenotyping Network Annual Conference, St. Louis, Missouri, United States Of America, 13 February 2023

III. **SEGMENTATION OF PLANT POINT CLOUDS FOR PHENOTYPING**
Yavuz A., Arda B., DUTAĞACI H., Sankur B.
31st IEEE Conference on Signal Processing and Communications Applications (SIU), İstanbul, Turkey, 5 - 08 July 2023

IV. **Measuring Electromagnetic Field Strength in Base Stations Using Unmanned Aerial Vehicles**
Isilak C., Durmaz O., Salk Y., Cevilkalp H., DUTAĞACI H., Girgin T.
31st IEEE Conference on Signal Processing and Communications Applications (SIU), İstanbul, Turkey, 5 - 08 July 2023

V. **PLANesT-3D: A new annotated data set of 3D color point clouds of plants**
Mertoglu K., Salk Y., Sarikaya S. K., TURGUT K., EVRENOSOĞLU Y., ÇEVİKALP H., Gerek O. N., DUTAĞACI H., Rousseau D.
31st IEEE Conference on Signal Processing and Communications Applications (SIU), İstanbul, Turkey, 5 - 08 July 2023

VI. **SPGS: A new method for autonomous 3D reconstruction of unknown objects by an industrial robot**
UYANIK C., SEÇİL S., ÖZKAN M., DUTAĞACI H., TURGUT K., PARLAKTUNA O.
19th Annual Conference on Towards Autonomous Robotic Systems, TAROS 2018, Bristol, England, 25 - 27 July 2018, vol.10965 LNAI, pp.15-27

VII. **Quality Sorting of Green Peppers based on Flexure**
Coksoyler C., DUTAĞACI H.
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018

VIII. **A Method for Determining Loccal Coordinate Frames Attached to Objects by a Laser Profile Sensor in Industrial Robot Workspaces**
TURGUT K., DUTAĞACI H., Söyleyici C., SEÇİL S., ÖZKAN M., PARLAKTUNA O., PARLAKTUNA M.
2017 IEEE International Conference on Autonomous Robot Systems and Competitions, Coimbra, Portugal, 26 April - 28 December 2017, pp.260-265

IX. **A Robotic System for Autonomous 3-D Surface Reconstruction of Objects. Design and Implementation**
SEÇİL S., TURGUT K., Söyleyici C., ÖZKAN M., PARLAKTUNA O., DUTAĞACI H., PARLAKTUNA M.
2017 The 3rd International Conference on Control and Automation and Robotics (ICCAR 2017), Nagoya, Japan, 22 - 24 April 2017, pp.188-191

X. **A Method for Determining Local Coordinate Frames Attached to Objects by a Laser Profile Sensor in Industrial Robot Workspaces**
TURGUT K., DUTAĞACI H., Soyleyici C., SEÇİL S., ÖZKAN M., PARLAKTUNA O., Parlaktuna M.
17th IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC), Coimbra, Portugal, 26 - 28 April 2017, pp.260-265

XI. **A Robotic System for Autonomous 3-D Surface Reconstruction of Objects**
SEÇİL S., TURGUT K., Soyleyici C., ÖZKAN M., PARLAKTUNA O., DUTAĞACI H., Parlaktuna M.
3rd IEEE International Conference on Control, Automation and Robotics (ICCAR), Nagoya, Japan, 22 - 24 April 2017, pp.188-191

XII. **Human detection from still depth images**
Can G. N., DUTAĞACI H.
Electronic Imaging, 3D Image Processing, Measurement (3DIPM), and Applications 2016, 14 - 18 February 2016

XIII. **Design of an Application Programming Interface (API) for Commercial Industrial Robots**
SEÇİL S., Soyleyici C., ÖZKAN M., PARLAKTUNA O., DUTAĞACI H., TURGUT K., Parlaktuna M.
14th IEEE International Conference on Industrial Informatics (INDIN), Poitiers, France, 19 - 21 July 2016, pp.225-230

XIV. **Detection of humans from depth images**
Can G. N., Cakir B., Namlı A. T., DUTAĞACI H.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1477-1480

XV. **Bina İçi Ortamlarda Lazer Mesafe Verisi Kullanarak KuralTabanlı Kapı Bulma**
KALECİ B., Şenler Ç. M., DUTAĞACI H., PARLAKTUNA O.
2. Türkiye Robotbilim Konferansı (ToRK), Turkey, 26 - 27 October 2015

XVI. **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

XVII. **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

XVIII. **Hand based biometry**
Yoruk E., Dutagaci H., Sankur B.
Conference on Image and Video Communications and Processing 2005, San-Jose, Costa Rica, 18 - 20 January 2005, vol.5685, pp.1106-1115

XIX. **Transform-based methods for indexing and retrieval of 3D objects**
Dutagaci H., Sankur B., Yemez Y.
5th International Conference on 3-D Digital Imaging and Modeling (3DIM 2005), Ottawa, Canada, 13 - 16 June 2005, pp.188-195

Metrics

Publication: 37
Citation (WoS): 344
Citation (Scopus): 479
H-Index (WoS): 8
H-Index (Scopus): 10