Prof. Behçet Uğur Töreyin

Personal Information

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International Researcher IDs
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Biography

Behçet Uğur Töreyin received the B.S. degree from the Middle East Technical University, Ankara, Turkey in 2001, and the M.S. and Ph.D. degrees from Bilkent University, Ankara, in 2003 and 2009, respectively, all in electrical and electronics engineering. He is a full professor with the Informatics Institute at Istanbul Technical University. His research interests lie in signal processing and pattern recognition with applications to computational intelligence. He is the head of the Signal Processing for Computational Intelligence Research Group (SP4CING – https://spacing.itu.edu.tr/). His research is focused on developing algorithms to analyze and compress signals from sensors, such as visible/infrared/hyperspectral cameras.

Education Information

Doctorate, Ihsan Dogramaci Bilkent University, Institute Of Engineering And Natural Sciences, Elektrik-Elektronik Mühendisliği (Dr), Turkey 2003 - 2009
Postgraduate, Ihsan Dogramaci Bilkent University, Institute Of Engineering And Natural Sciences, Elektrik Ve Elektronik Mühendisliği (Yl) (Tezli), Turkey 2001 - 2003
Undergraduate, Middle East Technical University, Faculty Of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 1997 - 2001

Foreign Languages

English

Dissertations

Doctorate, Fire detection algorithms using multimodal signal and image analysis, İhsan Doğramacı Bilkent Üniversitesi, Mühendislik Ve Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr), 2009
Postgraduate, Moving object detection and tracking in wavelet compressed video, İhsan Doğramacı Bilkent Üniversitesi, Mühendislik Ve Fen Bilimleri Enstitüsü, Elektrik Ve Elektronik Mühendisliği (Yl) (Tezli), 2003

Research Areas

Electrical and Electronics Engineering, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2016 - Continues
Assistant Professor, Cankaya University, Faculty Of Engıneerıng, Department Of Electrıcal And Electronıcs Engıneerıng, 2014 - 2015
Assistant Professor, Cankaya University, Faculty Of Engıneerıng, Department Of Electronıcs And Communıcatıons Engıneerıng, 2011 - 2014
Research Assistant, Texas A&M University, Mühendislik Fakültesi - Katar, Elektrik Ve Bilgisayar Mühendisliği, 2010 - 2011
Research Assistant, University of Minnesota, Mühendislik Fakültesi, Bilgisayar Bilimleri Bölümü, 2009 - 2010
Research Assistant, Ihsan Dogramaci Bilkent University, Faculty Of Engıneerıng, Department Of Electrıcal And Electronıcs Engıneerıng, 2001 - 2009

Academic and Administrative Experience

Program Koordinatörü, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2020 - Continues
Rector's Advisor, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2021 - 2021
International Strategies Coordinator, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2020 - 2021
International Student Coordinator, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2020 - 2020
Assistant Director of the Institute, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2018 - 2020
Çankaya Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2014 - 2015
Çankaya Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2014 - 2014
Çankaya Üniversitesi, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2013 - 2014

Published journal articles indexed by SCI, SSCI, and AHCI

I. **PURSUhInT: In Search of Informative Hint Points Based on Layer Clustering for Knowledge Distillation**
Keser R. K., Ayanzadeh A., Aghdam O. A., Kilcioglu C., Toreyin B. U., Ure N. K.
Expert Systems with Applications, vol.213, 2023 (SCI-Expanded)

II. **Iterative Enhanced Multivariance Products Representation for Effective Compression of Hyperspectral Images**
Tuna S., Töreyin B. U., Demiralp M., Ren J., Zhao H., Marshall S.
IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING, vol.59, no.11, pp.9569-9584, 2021 (SCI-Expanded)

III. **A whole-slide image grading benchmark and tissue classification for cervical cancer precursor lesions with inter-observer variability**
Albayrak A., Akhan A. U., ÇALIK N., Çapar A., BİLGİN G., Töreyin B. U., Muezzinoglu B., Turkmen I., Durak Ata L.
MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol.59, pp.1545-1561, 2021 (SCI-Expanded)

IV. **Automated scoring of CerbB2/HER2 receptors using histogram based analysis of immunohistochemistry breast cancer tissue images**
Kabakci K. A., Cakir A., Turkmen I., Töreyin B. U., Çapar A.
BIOMEDICAL SIGNAL PROCESSING AND CONTROL, vol.69, 2021 (SCI-Expanded)

V. **Improved cell segmentation using deep learning in label-free optical microscopy images**
Ayanzadeh A., Ozuysal O. Y., Okvur D. P., Onal S., Töreyin B. U., Unay D.

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.29, pp.2855-2868, 2021 (SCI-Expanded)

VI. **Vehicle License Plate Detector in Compressed Domain**
Beratoğlu M. S., Töreyin B. U.
IEEE ACCESS, vol.9, pp.95087-95096, 2021 (SCI-Expanded)

VII. **Myelin detection in fluorescence microscopy images using machine learning**
ÇİMEN YETİŞ S., Çapar A., Ekinci D. A., AYTEN U. E., Kerman B. E., Töreyin B. U.
JOURNAL OF NEUROSCIENCE METHODS, vol.346, 2020 (SCI-Expanded)

VIII. **Metaphase finding with deep convolutional neural networks**
Moazzen Y., Çapar A., Albayrak A., Calik N., Töreyin B. U.
BIOMEDICAL SIGNAL PROCESSING AND CONTROL, vol.52, pp.353-361, 2019 (SCI-Expanded)

IX. **Sparse and low-rank matrix decomposition-based method for hyperspectral anomaly detection**
Kucuk F., Töreyin B. U., Celebi F. V.
JOURNAL OF APPLIED REMOTE SENSING, vol.13, no.1, 2019 (SCI-Expanded)

X. **Flow structure and fish passage performance of a brush-type fish way: a field study in the yidere River, Turkey**
KÜÇÜKALİ S., VEREP B., ALP A., TURAN D., MUTLU T., KAYA C., Yildirim Y., Töreyin B. U., Ozelci D.
MARINE AND FRESHWATER RESEARCH, vol.70, no.11, pp.1619-1632, 2019 (SCI-Expanded)

XI. **Tridiagonal Folmat Enhanced Multivariance Products Representation Based Hyperspectral Data Compression**
Gundogar Z., Töreyin B. U., Demiralp M.
IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING, vol.11, no.9, pp.3272-3278, 2018 (SCI-Expanded)

XII. **Adaptive decision fusion based framework for short-term wind speed and turbulence intensity forecasting: case study for North West of Turkey**
Dinckal C., Toreyin B. U., Kucukali S.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.25, no.4, pp.2770-2783, 2017 (SCI-Expanded)

XIII. **Joint parameter and state estimation of the hemodynamic model by iterative extended Kalman smoother**
Aslan S., Cemgil A. T., ASLAN M. S., Toreyin B. U., Akin A.
BIOMEDICAL SIGNAL PROCESSING AND CONTROL, vol.24, pp.47-62, 2016 (SCI-Expanded)

XIV. **Sparse representations for online-learning-based hyperspectral image compression**
Ulku I., Töreyin B. U.
APPLIED OPTICS, vol.54, no.29, pp.8625-8631, 2015 (SCI-Expanded)

Patent

Töreyin B. U., Method, Device and System for Determining the Presence of Volatile Organic Compounds (VOC) in Video, Patent, CHAPTER H Electricity, Standard Registration

Dinçkal Ç., Töreyin B. U., Küçükali S., Çevrimiçi uyarlanır öğrenme yöntemi ile kısa dönem rüzgar hızı ve türbulans şiddetitahmin yöntemi, Patent, CHAPTER G Physics, The Invention Registration Number: 2017 08743 , Standard Registration, 2020

Metrics

Publication: 98
Citation (WoS): 882
Citation (Scopus): 1439

H-Index (WoS): 11
H-Index (Scopus): 13

Non Academic Experience

Niceveri Araştırma Geliştirme Bilişim Ticaret Ltd. Şti.
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