

Asst. Prof. Faik Boray Tek

Personal Information

Office Phone: [+90 216 285 3551](tel:+902162853551)

Email: tekfb@itu.edu.tr

Web: <https://avesis.itu.edu.tr/tekfb>

International Researcher IDs

ScholarID: [hoUIZL4AAAAJ](https://orcid.org/0000-0002-8649-6013)

ORCID: 0000-0002-8649-6013

Publons / Web Of Science ResearcherID: H-3423-2012

ScopusID: 6506120545

Yoksis Researcher ID: 38373

Biography

Faik (comes from my grandfather) Boray Tek was born in Ankara in 1978. I received my B.Sc degree from Baskent University Electrical and Electronics Engineering Department in 2000. I received my M.Sc degree from Middle East Technical University, Electrical And Electronics Eng, Robotics option in 2003 with a thesis on "Face Detection using learning networks". I worked at TUBITAK Information Sciences and Technologies Institute (formerly Tubitak-Bilten, now named as Tubitak-Uzay) as a computer vision researcher. I received my PHD title (Feb 2007) from University of Westminster, School of Electronics and Computer Science on biomedical image processing on the problem of "Microscopy Diagnosis of Malaria". After the PHD, I worked one year in University of Westminster as a postdoc, then in MedieSight as a research scientist for another year. After coming back to Turkey, in 2009, I joined Computer Engineering Department of Isik University (Sile, Istanbul) as an Assistant Professor. I am one of the founders of Robotics and Autonomous Vehicles Laboratory in Işık University.

My research focuses on computer vision, (bio)image analysis, and machine learning. Through my research career, I had the privilege of working on intriguing vision problems which included face detection & recognition, identification of African Clawed frogs, diagnosis of malaria in microscopy images, tumor/nodule detection in computerized tomography, nucleus detection in mouse brain scans, vision for autonomous model vehicles, mitosis counting in pathology images, and neural networks and its applications.

Education Information

Doctorate, University of Westminster, School of Electronics and Computer Science, England 2003 - 2007

Postgraduate, Middle East Technical University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 2000 - 2002

Undergraduate, Baskent University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1996 - 2000

Research Areas

Computer Sciences, Computer Vision, Artificial Intelligence, Computer Learning and Pattern Recognition, Pattern Recognition and Image Processing, Neural Networks, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Isik University, Faculty Of Engineering, Department Of Computer Engineering, 2009 - 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Adaptive convolution kernel for artificial neural networks?**
Tek F. B., Cam I., Karli D.
JOURNAL OF VISUAL COMMUNICATION AND IMAGE REPRESENTATION, vol.75, 2021 (SCI-Expanded)
- II. **An adaptive locally connected neuron model: Focusing neuron**
Tek F. B.
NEUROCOMPUTING, vol.419, pp.306-321, 2021 (SCI-Expanded)
- III. **Implicit Theories and Self-Efficacy in an Introductory Programming Course**
Tek F. B., Benli K. S., Deveci E.
IEEE TRANSACTIONS ON EDUCATION, vol.61, no.3, pp.218-225, 2018 (SCI-Expanded)
- IV. **Assessment of algorithms for mitosis detection in breast cancer histopathology images**
Veta M., van Diest P. J., Willems S. M., Wang H., Madabhushi A., Cruz-Roa A., Gonzalez F., Larsen A. B. L., Vestergaard J. S., Dahl A. B., et al.
MEDICAL IMAGE ANALYSIS, vol.20, no.1, pp.237-248, 2015 (SCI-Expanded)
- V. **Robust localization and identification of African clawed frogs in digital images**
Tek F. B., Cannavo F., Nunnari G., Kale I.
ECOLOGICAL INFORMATICS, vol.23, pp.3-12, 2014 (SCI-Expanded)
- VI. **Parasite detection and identification for automated thin blood film malaria diagnosis**
Tek F. B., Dempster A. G., Kale I.
COMPUTER VISION AND IMAGE UNDERSTANDING, vol.114, no.1, pp.21-32, 2010 (SCI-Expanded)
- VII. **Computer vision for microscopy diagnosis of malaria**
Tek F. B., Dempster A. G., Kale I.
MALARIA JOURNAL, vol.8, 2009 (SCI-Expanded)
- VIII. **Noise sensitivity of watershed segmentation for different connectivity: experimental study**
Tek F. B., Dempster A., Kale I.
ELECTRONICS LETTERS, vol.40, no.21, pp.1332-1333, 2004 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Convolutional Attention Network for MRI-based Alzheimer's Disease Classification and its Interpretability Analysis**
Türkan Y., Tek F. B.
6th International Conference on Computer Science and Engineering, UBMK 2021, Ankara, Turkey, 15 - 17 September 2021, pp.151-156
- II. **Tweet Sentiment Analysis for Cryptocurrencies**
Şaşmaz E., Tek F. B.
6th International Conference on Computer Science and Engineering, UBMK 2021, Ankara, Turkey, 15 - 17 September 2021, pp.613-618
- III. **Using Adaptive Locally Connected Layer in Attention Based Deep Neural Network for Speech Command Recognition**
Uyarlanir Yerel Bagli Katman Kullanan Dikkat Tabanlı Derin Ağ ile Sesli

Komut Tanima

Turkan Y., Tek F. B.

28th Signal Processing and Communications Applications Conference, SIU 2020, Gaziantep, Turkey, 5 - 07 October 2020

- IV. **Forecasting and Analysis of Domestic Solid Waste Generation in Districts of Istanbul with Support Vector Regression**
Ozcelik S. T., Tek F. B.
5th International Conference on Computer Science and Engineering (UBMK), Diyarbakır, Turkey, 9 - 11 September 2020, pp.366-371
- V. **Web Service Translating Content into Turkish Sign Language**
Gumuscekicci G., Ezerceci O., Tek F. B.
5th International Conference on Computer Science and Engineering (UBMK), Diyarbakır, Turkey, 9 - 11 September 2020, pp.355-359
- VI. **Animal Sound Classification Using A Convolutional Neural Network**
Sasmaz E., Tek F. B.
3rd International Conference on Computer Science and Engineering (UBMK), Sarajevo, Bosnia And Herzegovina, 20 - 23 September 2018, pp.625-629
- VII. **A Haar Classifier Based CNN for Number Detection and Counting Method for Library Books**
Kanburoglu A. B., Tek F. B.
3rd International Conference on Computer Science and Engineering (UBMK), Sarajevo, Bosnia And Herzegovina, 20 - 23 September 2018, pp.504-508
- VIII. **Malaria Parasite Detection with Deep Transfer Learning**
Var E., Tek F. B.
3rd International Conference on Computer Science and Engineering (UBMK), Sarajevo, Bosnia And Herzegovina, 20 - 23 September 2018, pp.298-302
- IX. **Focusing neuron Odaklanan Nöron**
Cam I., Tek F. B.
25th Signal Processing and Communications Applications Conference, SIU 2017, Antalya, Turkey, 15 - 18 May 2017
- X. **Examining Self-Efficacy Perception and Attitudes of Introduction to Programming Course Students With Respect To Gender and Course Language**
Deveci E., Aydin D., Benli K. S., Tek F. B.
2017 International Conference on Computer Science and Engineering (UBMK), Antalya, Turkey, 5 - 08 October 2017, pp.745-750
- XI. **Interactive Learning Based Nodule Detection in CT Lung Volumes**
Cam I., Tek F. B.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.2021-2024
- XII. **Ground Plane Detection Using an RGB-D Sensor**
Kircali D., Tek F. B.
29th Annual Symposium on Computer and Information Sciences, Krakow, Poland, 27 - 28 October 2014, pp.69-77
- XIII. **Ground Plane Detection Using Kinect Sensor**
Kircali D., Tek F. B., Iyidir I. K.
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013
- XIV. **Adaptive Visual Obstacle Detection for Mobile Robots Using Monocular Camera and Ultrasonic Sensor**
Iyidir I. K., Tek F. B., Kircali D.
12th European Conference on Computer Vision (ECCV), Florence, Italy, 7 - 13 October 2012, vol.7584, pp.526-535
- XV. **Feature Selection for Computer-Aided Polyp Detection using MRMR**
Yang X., Tek B., Beddoe G., Slabaugh G.
Conference on Medical Imaging 2010 - Computer-Aided Diagnosis, California, United States Of America, 16 - 18 February 2010, vol.7624

- XVI. **A colour normalization method for Giemsa-stained blood cell images**
Tek F. B., Dempster A. G., Kale I.
IEEE 14th Signal Processing and Communications Applications, Antalya, Turkey, 16 - 19 April 2006, pp.559-560
- XVII. **GAYE: A face recognition system**
Kepenekci B., Tek F. B., Cilingir O., Sakarya U., Akar G.
Conference on Image Processing - Algorithms and Systems III, San-Jose, Costa Rica, 19 - 21 January 2004, vol.5298, pp.99-106
- XVIII. **A comparative performance test of a new ballistic analysis System-BALISTIKA**
Leloglu U., Sakarya U., Tek F. B., Cilingir O., Tunali E.
3rd European-Academy-of-Forensic-Science Meeting, İstanbul, Turkey, 22 - 27 September 2003, vol.136, pp.163-164
- XIX. **A new automated firearms identification system using 3D information-balistika**
Leloglu U., Sakarya U., Tek B., Cilingir O., Yerlikaya M.
3rd European-Academy-of-Forensic-Science Meeting, İstanbul, Turkey, 22 - 27 September 2003, vol.136, pp.160

Supported Projects

Tek F. B., Project Supported by Higher Education Institutions, İki Boyutlu Uyarlanırlı Yerel Bağlı Nöron Modeli, 2023 - Continues

Tek F. B., TUBITAK Project, Optik Koherens Tomografi (Ve Anjiyografi) Taramaları Ve Derin Öğrenme Tabanlı Alzheimer Hastalığı Teşhisi, 2023 - 2025

Tek F. B., TUBITAK Project, 118E722 - Odaklanan Yapay Nöron Modeli Ve Yapay Sinir Ağlarında Topolojiyi Öğrenmek İçin Yeni Bir Yöntem, 2019 - 2021

Metrics

Publication: 34

Citation (WoS): 454

Citation (Scopus): 733

H-Index (WoS): 7

H-Index (Scopus): 9