

Prof. Ender Mete Ekşioğlu

Personal Information

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International Researcher IDs

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ScopusID: 8688723500

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Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Elektronik Ve Haberleşme Mühendisliği Anabilim Dalı, Turkey 1999 - 2005

Postgraduate, University of Michigan, Elektrik-Elektronik Mühendisliği, United States Of America 1997 - 1999

Undergraduate, University of Michigan, Elektrik-Elektronik Mühendisliği, United States Of America 1994 - 1997

Foreign Languages

German

English

Dissertations

Doctorate, Voltterra Süzgeci gösterilimi, tanımlaması ve gerçeklemesi için yeni yöntemler, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Elektronik Ve Haberleşme Mühendisliği Anabilim Dalı, 2005

Research Areas

Information Systems, Communication and Control Engineering, Signal Processing, Image and Video Processing, Signal Processing Theory and Methods, Artificial Intelligence, Computer Learning and Pattern Recognition, Computer Learning, Neural Networks, Electrical and Electronics Engineering, Engineering and Technology

Academic Titles / Tasks

Professor, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, 2019 - Continues
Associate Professor, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, 2013 - 2019

Assistant Professor, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, 2005 - 2013

Research Assistant, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, 1999 -

Advising Theses

- Ekşioğlu E. M., Derin öğrenme tabanlı görüntü gürültü giderme için yoğun bağlantı kullanan yeni yaklaşımlar, Postgraduate, V.ACAR(Student), 2022
- Ekşioğlu E. M., A FULLY CONVOLUTIONAL ENCODER-DECODER NETWORK FOR MOVING OBJECT SEGMENTATION, Postgraduate, A.TÜRKER(Student), 2022
- Ekşioğlu E. M., PERFORMANCE ANALYSIS OF SOURCE ENUMERATION METHODS UNDER CO-CHANNEL INTERFERENCE, Postgraduate, F.CANER(Student), 2022
- Ekşioğlu E. M., Superpixel assisted deep neural network for breast tumor segmentation in ultrasound images, Postgraduate, N.UYSAL(Student), 2022
- Ekşioğlu E. M., Image reconstruction with deep learning and applications in MR images, Doctorate, A.AGHABIGLOU(Student), 2022
- Ekşioğlu E. M., APPLICATION AND PERFORMANCE ANALYSIS OF INFRARED AND VISIBLE IMAGE FUSION METHODS, Postgraduate, O.CAN(Student), 2021
- Ekşioğlu E. M., Görüntü işlemede derin öğrenme tabanlı süper çözünürlük uygulamaları, Postgraduate, A.VURAL(Student), 2021
- Ekşioğlu E. M., Paralel manyetik rezonans görüntüleme teknikleri ve uygulamaları, Postgraduate, Ç.ESİ(Student), 2021
- Ekşioğlu E. M., Derin öğrenme ile görüntülerde gürültü giderme, Postgraduate, S.SATICI(Student), 2021
- Ekşioğlu E. M., DERİN ÖĞRENME ALGORİTMALARI İLE ŞERİT TESPİT SİSTEMİ, Postgraduate, T.ÖZGÜR(Student), 2021
- Ekşioğlu E. M., Hasar değerlendirme süreçlerinde makine öğrenmesi ve derin öğrenme tabanlı hibrit model yaklaşımı, Postgraduate, K.ÖZÇELİK(Student), 2021
- Ekşioğlu E. M., Generative adversarial networks in computer vision applications, Postgraduate, S.ÖRNEK(Student), 2021
- Ekşioğlu E. M., Görüntü işlemede yama sıralama tabanlı yaklaşımlar, Doctorate, Ö.ÇOLAK(Student), 2021
- Ekşioğlu E. M., Sparsity based pansharpening and a new pansharpening method using a guiding image, Postgraduate, R.JI(Student), 2019
- Ekşioğlu E. M., Seyreklik ve sözlük öğrenme yaklaşımlarının sınıflandırma ve yüz tanımaya uygulanması, Postgraduate, B.Azizoğlu(Student), 2017
- Ekşioğlu E. M., Seyrek işaret işlemede sınıflandırma uygulamaları ve çekirdek tabanlı yaklaşımlar, Postgraduate, A.YEŞİLOĞLU(Student), 2015
- Ekşioğlu E. M., Analiz ve sentez seyreklik için sözlük öğrenme algoritmaları ve görüntü işlemede uygulamaları, Postgraduate, Ö.BAYIR(Student), 2015
- Ekşioğlu E. M., Örneklem tabanlı gürbüz konuşma tanıma, Postgraduate, F.AKTÜRK(Student), 2015
- Ekşioğlu E. M., Seyreklik temelli sınıflandırmanın hiperspektral görüntülerde uygulamaları, Postgraduate, H.ÇAĞLAR(Student), 2015
- Ekşioğlu E. M., Faz-MIMO radar, Postgraduate, Ç.GÜRBÜZ(Student), 2014
- Ekşioğlu E. M., İşaretlerin seyrek gösterilimi için sözlük tasarımı, Postgraduate, E.YAVUZ(Student), 2011
- Ekşioğlu E. M., Gözü kapalı kaynak ayırtırmada seyreklik tabanlı yöntemler ve DUET algoritması, Postgraduate, M.Elmas(Student), 2010

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **MR image reconstruction using iterative up and downsampling network**
Aghabiglou A., Ekinci D. A., Ekşioğlu E. M., Töreyin B. U.
Expert Systems with Applications, vol.237, 2024 (SCI-Expanded)
- II. **DCTNet: deep shrinkage denoising via DCT filterbanks**
Karaoğlu H. H., Ekşioğlu E. M.
Signal, Image and Video Processing, vol.17, no.7, pp.3665-3676, 2023 (SCI-Expanded)

- III. **Densely Connected Dilated Residual Network for Image Denoising: DDR-Net**
Acar V., Ekşioğlu E. M.
Neural Processing Letters, vol.55, no.5, pp.5567-5581, 2023 (SCI-Expanded)
- IV. **Deep unfolding architecture for MRI reconstruction enhanced by adaptive noise maps**
Aghabiglou A., Ekşioğlu E. M.
BIOMEDICAL SIGNAL PROCESSING AND CONTROL, vol.78, 2022 (SCI-Expanded)
- V. **On the fly image denoising using patch ordering**
Colak O., Ekşioğlu E. M.
EXPERT SYSTEMS WITH APPLICATIONS, vol.190, 2022 (SCI-Expanded)
- VI. **MR image reconstruction using densely connected residual convolutional networks**
Aghabiglou A., Ekşioğlu E. M.
COMPUTERS IN BIOLOGY AND MEDICINE, vol.139, 2021 (SCI-Expanded)
- VII. **Projection-Based cascaded U-Net model for MR image reconstruction**
Aghabiglou A., Ekşioğlu E. M.
Computer Methods and Programs in Biomedicine, vol.207, 2021 (SCI-Expanded)
- VIII. **Identification of smart jammers: Learning-based approaches using wavelet preprocessing**
Topal O. A., Gecgel S., Ekşioğlu E. M., Karabulut Kurt G. Z.
PHYSICAL COMMUNICATION, vol.39, 2020 (SCI-Expanded)
- IX. **Image denoising using patch ordering and 3D transformation of patches**
Colak O., Ekşioğlu E. M.
IET Image Processing, vol.13, pp.2636-2646, 2019 (SCI-Expanded)
- X. **Denoising AMP for MRI Reconstruction: BM3D-AMP-MRI**
Ekşioğlu E. M., Tanc A. K.
SIAM JOURNAL ON IMAGING SCIENCES, vol.11, no.3, pp.2090-2109, 2018 (SCI-Expanded)
- XI. **Decoupled Algorithm for MRI Reconstruction Using Nonlocal Block Matching Model: BM3D-MRI**
Ekşioğlu E. M.
JOURNAL OF MATHEMATICAL IMAGING AND VISION, vol.56, no.3, pp.430-440, 2016 (SCI-Expanded)
- XII. **MRI reconstruction with joint global regularization and transform learning**
Tanc A. K., Ekşioğlu E. M.
COMPUTERIZED MEDICAL IMAGING AND GRAPHICS, vol.53, pp.1-8, 2016 (SCI-Expanded)
- XIII. **Group sparse RLS algorithms**
Ekşioğlu E. M.
INTERNATIONAL JOURNAL OF ADAPTIVE CONTROL AND SIGNAL PROCESSING, vol.28, no.12, pp.1398-1412, 2014 (SCI-Expanded)
- XIV. **Online dictionary learning algorithm with periodic updates and its application to image denoising**
Ekşioğlu E. M.
EXPERT SYSTEMS WITH APPLICATIONS, vol.41, no.8, pp.3682-3690, 2014 (SCI-Expanded)
- XV. **K-SVD Meets Transform Learning: Transform K-SVD**
Ekşioğlu E. M., BAYIR O.
IEEE SIGNAL PROCESSING LETTERS, vol.21, no.3, pp.347-351, 2014 (SCI-Expanded)
- XVI. **Reliability analysis of the complex mode indicator function and Hilbert Transform techniques for operational modal analysis**
Bakir P., EKŞIOĞLU E. M., ALKAN S.
EXPERT SYSTEMS WITH APPLICATIONS, vol.39, no.18, pp.13289-13294, 2012 (SCI-Expanded)
- XVII. **System Identification of a Reinforced Concrete Building Using the Complex Mode Indicator Function and the Hilbert Transform Techniques**
Bakir P., Ekşioğlu E. M., ALKAN S.
JOURNAL OF TESTING AND EVALUATION, vol.40, no.3, pp.427-434, 2012 (SCI-Expanded)
- XVIII. **RLS Algorithm With Convex Regularization**
Ekşioğlu E. M., TANC A. K.
IEEE SIGNAL PROCESSING LETTERS, vol.18, no.8, pp.470-473, 2011 (SCI-Expanded)

- XIX. **Sparsity regularised recursive least squares adaptive filtering**
Eksioglu E. M.
IET SIGNAL PROCESSING, vol.5, no.5, pp.480-487, 2011 (SCI-Expanded)
- XX. **A comparative study on the subspace based system identification techniques applied on civil engineering structures**
Bakir P. G., Alkan S., Ekşioğlu E. M.
SMART STRUCTURES AND SYSTEMS, vol.7, no.2, pp.153-167, 2011 (SCI-Expanded)
- XXI. **Nonlinear system identification using deterministic multilevel sequences**
Kayran A. H., Eksioglu E. M.
CIRCUITS SYSTEMS AND SIGNAL PROCESSING, vol.24, no.2, pp.151-181, 2005 (SCI-Expanded)
- XXII. **Volterra kernel estimation for nonlinear communication channels using deterministic sequences**
Eksioglu E. M., KAYRAN A. H.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.59, no.2, pp.118-127, 2005 (SCI-Expanded)
- XXIII. **2D FIR Wiener filter realisation using orthogonal lattice structures**
Kayran A. H., Eksioglu E. M.
ELECTRONICS LETTERS, vol.36, no.12, pp.1078-1079, 2000 (SCI-Expanded)

Books & Book Chapters

- I. **Bilgisayar Uygulamalarıyla Sayısal İşaret İşleme**
Kayran A. H., Ekşioğlu E. M.
Birsen Yayınevi, İstanbul, 2010

Refereed Congress / Symposium Publications in Proceedings

- I. **A Plug-and-Play Deep Denoiser Prior Model for Accelerated MRI Reconstruction**
Karaoğlu H. H., Ekşioğlu E. M.
45th International Conference on Telecommunications and Signal Processing, TSP 2022, Virtual, Online, Czech Republic, 13 - 15 July 2022, pp.260-263
- II. **Densely connected wavelet-based autoencoder for MR image reconstruction**
Aghabiglou A., Ekşioğlu E. M.
45th International Conference on Telecommunications and Signal Processing, TSP 2022, Virtual, Online, Czech Republic, 13 - 15 July 2022, pp.212-215
- III. **A Fully Convolutional Encoder-Decoder Network for Moving Object Segmentation**
Turker A., Ekşioğlu E. M.
16th International Conference on INnovations in Intelligent SysTems and Applications, INISTA 2022, Biarritz, France, 8 - 12 August 2022
- IV. **MR Image Reconstruction Based on Densely Connected Residual Generative Adversarial Network-DCR-GAN**
Aghabiglou A., Ekşioğlu E. M.
13th International Conference on Computational Collective Intelligence, ICCCI 2021, Virtual, Online, 29 September - 01 October 2021, vol.1463, pp.679-689
- V. **Scale Input Adapted Attention for Image Denoising Using a Densely Connected U-Net: SADE-Net**
Acar V., Ekşioğlu E. M.
13th International Conference on Computational Collective Intelligence, ICCCI 2021, Virtual, Online, 29 September - 01 October 2021, vol.12876 LNAI, pp.792-801
- VI. **Myelin segmentation in fluorescence microscopy images Floresan mikroskop görüntülerinde miyelin segmentasyonu**

Yetis S. C., Ekinci D. A., Cakir E., Ekşioğlu E. M., AYTEN U. E., Çapar A., Töreyin B. U., Kerman B. E.

2019 Medical Technologies Congress, TIPTEKNO 2019, İzmir, Turkey, 3 - 05 October 2019

VII. Deep Learning for Mri Reconstruction Using A Novel Projection Based Cascaded Network

Kocanaogullari D., Ekşioğlu E. M.

29th IEEE International Workshop on Machine Learning for Signal Processing, MLSP 2019, Pennsylvania, United States Of America, 13 - 16 October 2019

VIII. Myelin Segmentation in Fluorescence Microscopy Images

ÇİMEN YETİŞ S., Ekinci D. A., Cakir E., Ekşioğlu E. M., AYTEN U. E., Çapar A., Töreyin B. U., Kerman B. E.

Medical Technologies Congress (TIPTEKNO), İzmir, Turkey, 3 - 05 October 2019, pp.141-144

IX. MRI RECONSTRUCTION WITH ANALYSIS SPARSE REGULARIZATION UNDER IMPULSIVE NOISE

Tanc A. K., Ekşioğlu E. M.

24th European Signal Processing Conference (EUSIPCO), Budapest, Hungary, 28 August - 02 September 2016, pp.538-541

X. Classification Applications of Sparse Signal Processing and Kernel Based Methods

Yesiloglu A., Ekşioğlu E. M.

24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1157-1160

XI. Analysis Sparsity Based Single Image Superresolution

Bayir O., Ekşioğlu E. M.

24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.977-980

XII. TRANSFORM LEARNING MRI WITH GLOBAL WAVELET REGULARIZATION

Tanc A. K., Ekşioğlu E. M.

23rd European Signal Processing Conference (EUSIPCO), Nice, France, 31 August - 04 September 2015, pp.1855-1859

XIII. OVERCOMPLETE SPARSIFYING TRANSFORM LEARNING ALGORITHM USING A CONSTRAINED LEAST SQUARES APPROACH

Ekşioğlu E. M., BAYIR O.

IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Florence, Italy, 4 - 09 May 2014

XIV. A CLUSTERING BASED FRAMEWORK FOR DICTIONARY BLOCK STRUCTURE IDENTIFICATION

Ekşioğlu E. M.

IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Prague, Czech Republic, 22 - 27 May 2011, pp.4044-4047

XV. Generalized 2D Lattice Structure for Causal and Noncausal Modeling of Random Fields

Kayran A. H., CAMCIOGLU E., Ekşioğlu E. M., TANC A. K., Seker S.

IEEE International Symposium on Circuits and Systems (ISCAS), Rio-De-Janeiro, Brazil, 15 - 18 May 2011, pp.1756-1759

XVI. RLS adaptive filtering with sparsity regularization

Ekşioğlu E. M.

10th International Conference on Information Sciences, Signal Processing and their Applications, ISSPA 2010, Kuala-Lumpur, Malaysia, 10 - 13 May 2010, pp.550-553

XVII. A compressive sensing framework for multirate signal estimation

Ekşioğlu E. M., Tanc A. K., Kayran A. H.

10th International Conference on Information Sciences, Signal Processing and their Applications, ISSPA 2010, Kuala-Lumpur, Malaysia, 10 - 13 May 2010, pp.716-719

XVIII. Adaptive multirate signal estimation with lattice orthogonalization

Tanc A. K., Ekşioğlu E. M., Kayran A. H.

2009 16th IEEE International Conference on Electronics, Circuits and Systems, ICECS 2009, Yasmine Hammamet, Tunisia, 13 - 16 December 2009, pp.117-119

XIX. Lattice-ladder structure for 2D ARMA filters

Ekşioğlu E. M., Kayran A. H.

30th IEEE International Conference on Acoustics, Speech, and Signal Processing, Pennsylvania, United States Of America, 19 - 23 March 2005, pp.101-104

XX. Nonlinear system identification using deterministic multilevel sequences

Ekşioğlu E. M., Kayran A. H.

14th International Conference on Digital Signal Processing, DSP 2002, Santorini, Hellas, Greece, 1 - 03 July 2002, vol.2, pp.947-950

Supported Projects

Ekşioğlu E. M., Töreyin B. U., TUBITAK Project, Görüntü İşleme Ters Problemlerinde Derin Öğrenme, 2019 - 2022

Ekşioğlu E. M., Esi Ç., TANÇ A. K., Project Supported by Higher Education Institutions, Paralel manyetik rezonans görüntüleme teknikleri ve uygulamaları, 2019 - 2021

Ekşioğlu E. M., TANÇ A. K., Çolak Ö., Project Supported by Higher Education Institutions, Derin Öğrenme ve Özyineli Algoritmaların Birleşiminin Görüntü Çözünürlük Yükseltme ve MR Görüntü Geriçatımında Kullanımı, 2018 - 2021

Çayören M., BUĞDAYCI O., Ekşioğlu E. M., ŞİMŞEK S., GÖSE E., Ağaoğulları D., ARIBAL M. E., Yılmaz Abdolsaheb T., TUBITAK Project, Meme Kanserin Tanısı İçin Magnetik-Nanoparçacık Temelli Mikrodalga Görüntüleme Teknolojisinin Geliştirilmesi, 2017 - 2021

Ekşioğlu E. M., TUBITAK Project, Yama Sıralama Ve Seyrekleştirici Dönüşümlerin Görüntü Gürültüsü Giderme Ve Mr Görüntü Geriçatımında Kullanımı, 2018 - 2019

Ekşioğlu E. M., Project Supported by Higher Education Institutions, Analiz seyrek düzenleme kullanarak dürtüsel gürültü altında MR görüntü geriçatımı, 2016 - 2018

Ekşioğlu E. M., Project Supported by Higher Education Institutions, GLOBAL DALGACILIK DÜZENLENMELİ DÖNÜŞÜM ÖĞRENME MRI, 2015 - 2018

Ekşioğlu E. M., Project Supported by Higher Education Institutions, Seyreklik Tabanlı Sınıflandırma Algoritmaları ve Uygulamaları, 2014 - 2018

Ekşioğlu E. M., Project Supported by Higher Education Institutions, Blok-seyrek İşaretler İçin Sözlük Öğrenme Algoritmaları, 2013 - 2018

Ekşioğlu E. M., Project Supported by Higher Education Institutions, Sözlük Blok Yapısının Tanımlanması için Kümeleme Tabanlı algoritmalar, 2011 - 2018

Ekşioğlu E. M., Project Supported by Higher Education Institutions, SEYRAKLİK DÜZENLEMELİ RLS UYARLAMALI SÜZGEÇLEME, 2010 - 2018

Ekşioğlu E. M., Project Supported by Higher Education Institutions, Seyreklik Tabanlı İşaret İşlemenin Konuşma İşareti İşlemede Uygulamaları, 2013 - 2015

Ekşioğlu E. M., Project Supported by Higher Education Institutions, Sözlük Öğrenme Algoritmaları ve Görüntü Gürültüsü Gidermede Uygulamaları, 2013 - 2015

Ekşioğlu E. M., TUBITAK Project, Gerçek Zamanlı Sistem Tanıma Teknikleri Ve Sonlu Eleman Modeli Güncellemesi Yöntemleriyle Mevcut Binalarda Hasar Belirlenmesi, 2008 - 2011

Metrics

Publication: 47

Citation (WoS): 217

Citation (Scopus): 473

H-Index (WoS): 6

H-Index (Scopus): 9