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International Researcher IDs

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Publons / Web Of Science ResearcherID: C-1122-2013

Yoksis Researcher ID: 111736

Education Information

Doctorate, University of Florida, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, United States Of America 2006 - 2011

Postgraduate, University of Louisville, Mühendislik Fakültesi, Elektrik Ve Bilgisayar Mühendisliği Bölümü, United States Of America 2003 - 2005

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1999 - 2003

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Context-based classification via data-dependent mixtures of logistic and hidden Markov model classifiers, University Of Florida, Bilgisayar Mühendisliği, 2011

Postgraduate, Image Processing Methods For the Detection of Acute Rejection After Kidney Transplantation, University Of Louisville, Elektrik Ve Bilgisayar Mühendisliği, 2005

Research Areas

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

Academic Titles / Tasks

Associate Professor, Hacettepe University, Mühendislik Fakültesi, Elektrik ve Elektronik Bölümü, 2019 - Continues

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Elektrik ve Elektronik Bölümü, 2013 - 2019

Lecturer PhD, Middle East Technical University, Odtu Kuzey Kıbrıs Kampusu (Kktc-Güzelyurt), 2012 - 2013

Expert, University of Florida, Malzeme Mühendisliği, 2011 - 2012

Research Assistant, University of Florida, Bilgisayar Mühendisliği, 2006 - 2011

Research Assistant, University of Louisville, Elektrik Ve Bilgisayar Mühendisliği, 2003 - 2005

Advising Theses

YÜKSEL ERDEM S. E., Hyperspectral imagery super-resolution, Doctorate, H.IRMAK(Student), 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Multi-scale superpixel-based nearest subspace classifier for mucilage detection from hyperspectral PRISMA data**
TOKER K. G., YÜKSEL ERDEM S. E.
DIGITAL SIGNAL PROCESSING, 2024 (SCI-Expanded)
- II. **Shadow-aware terrain classification: advancing hyperspectral image sensing through generative adversarial networks and correlated sample synthesis**
PEKER A. U., Yuksel S. E., CİNBİŞ R. G., ÇETİN Y.
JOURNAL OF APPLIED REMOTE SENSING, no.3, 2024 (SCI-Expanded)
- III. **A two-stream deep model for automated ICD-9 code prediction in an intensive care unit**
Ayden M. A., Yuksel M. E., YÜKSEL ERDEM S. E.
Heliyon, vol.10, no.4, 2024 (SCI-Expanded)
- IV. **Hyperspectral image denoising via self-modulating convolutional neural networks**
Torun O., Yuksel S. E., Erdem E., Imamoglu N., Erdem A.
Signal Processing, vol.214, 2024 (SCI-Expanded)
- V. **Multi-source domain adaptation of GPR data for IED detection**
Oturak M., Yuksel S. E., Kucuk S.
Signal, Image and Video Processing, vol.17, no.5, pp.1831-1839, 2023 (SCI-Expanded)
- VI. **Fine-grained Classification of Solder Joints with β -skew Jensen-Shannon Divergence**
ÜLGER F., Yuksel S. E., YILMAZ A., GÖKCEN D.
IEEE Transactions on Components, Packaging and Manufacturing Technology, vol.13, no.2, pp.257-264, 2023 (SCI-Expanded)
- VII. **Solder Joint Inspection on Printed Circuit Boards: A Survey and a Dataset**
ÜLGER F., Yuksel S. E., YILMAZ A., GÖKCEN D.
IEEE Transactions on Instrumentation and Measurement, vol.72, 2023 (SCI-Expanded)
- VIII. **Camera Calibration Using Catenary**
Arik O., YÜKSEL ERDEM S. E.
IEEE SENSORS JOURNAL, vol.22, no.6, pp.5962-5968, 2022 (SCI-Expanded)
- IX. **Spectral-spatial nearest subspace classifier for hyperspectral image classification**
TOKER K. G., YÜKSEL ERDEM S. E.
INTERNATIONAL JOURNAL OF REMOTE SENSING, vol.43, no.6, pp.2106-2133, 2022 (SCI-Expanded)
- X. **Mobile Device Camera Calibration Using Building Images and Onboard Accelerometer**
Arik O., Yuksel S. E.
IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, vol.71, 2022 (SCI-Expanded)
- XI. **Pointwise Mutual Information-Based Graph Laplacian Regularized Sparse Unmixing**
Kucuk S., YÜKSEL ERDEM S. E.
IEEE GEOSCIENCE AND REMOTE SENSING LETTERS, vol.19, 2022 (SCI-Expanded)
- XII. **Anomaly Detection for Solder Joints Using beta-VAE**
ÜLGER F., YÜKSEL ERDEM S. E., YILMAZ A.
IEEE TRANSACTIONS ON COMPONENTS PACKAGING AND MANUFACTURING TECHNOLOGY, vol.11, no.12, pp.2214-2221, 2021 (SCI-Expanded)

- XIII. **An in-depth analysis of hyperspectral target detection with shadow compensation via LiDAR**
Oduncu E., YÜKSEL ERDEM S. E.
SIGNAL PROCESSING-IMAGE COMMUNICATION, vol.99, 2021 (SCI-Expanded)
- XIV. **Unsupervised segmentation of LiDAR fused hyperspectral imagery using pointwise mutual information**
Torun O., YÜKSEL ERDEM S. E.
INTERNATIONAL JOURNAL OF REMOTE SENSING, vol.42, no.17, pp.6465-6480, 2021 (SCI-Expanded)
- XV. **Total Utility Metric Based Dictionary Pruning for Sparse Hyperspectral Unmixing**
KÜÇÜK S., YÜKSEL ERDEM S. E.
IEEE TRANSACTIONS ON COMPUTATIONAL IMAGING, vol.7, pp.562-571, 2021 (SCI-Expanded)
- XVI. **Fully-connected semantic segmentation of hyperspectral and LiDAR data**
Aytaylan H., Yuksel S. E.
IET COMPUTER VISION, vol.13, no.3, pp.285-293, 2019 (SCI-Expanded)
- XVII. **A MAP-Based Approach for Hyperspectral Imagery Super-Resolution**
Irmak H., AKAR G., YÜKSEL ERDEM S. E.
IEEE TRANSACTIONS ON IMAGE PROCESSING, vol.27, no.6, pp.2942-2951, 2018 (SCI-Expanded)
- XVIII. **An investigation of the effect of neighboring objects to shadow areas on real data based on the physical radiance model**
Oduncu E., YÜKSEL ERDEM S. E.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.33, no.3, pp.887-904, 2018 (SCI-Expanded)
- XIX. **Context-based classification via mixture of hidden Markov model experts with applications in landmine detection**
YÜKSEL ERDEM S. E., Gader P. D.
IET COMPUTER VISION, vol.10, no.8, pp.873-883, 2016 (SCI-Expanded)
- XX. **SPICEE: An Extension of SPICE for Sparse Endmember Estimation in Hyperspectral Imagery**
Yuksel S. E., KÜÇÜK S., GADER P. D.
IEEE GEOSCIENCE AND REMOTE SENSING LETTERS, vol.13, no.12, pp.1910-1914, 2016 (SCI-Expanded)
- XXI. **Multiple-Instance Hidden Markov Models With Applications to Landmine Detection**
Yuksel S. E., Bolton J., Gader P.
IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING, vol.53, no.12, pp.6766-6775, 2015 (SCI-Expanded)

Articles Published in Other Journals

- I. **Effect of LiDAR sensor on the success of shadow detection from hyperspectral data**
YÜKSEL ERDEM S. E., Boyaci M.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.24, no.2, pp.198-204, 2018 (ESCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **Classification Of Solid Waste Using Computer Vision Techniques**
Akdemir B., Aytac E. E., Tosun E. M., Yuksel S. E.
26th IEEE Signal Processing: Algorithms, Architectures, Arrangements, and Applications, SPA 2023, Poznan, Poland, 20 - 22 September 2023, vol.2023-September, pp.136-141
- II. **Plankton Classification with Deep Learning**
Somek B., Yuksel S. E.
26th IEEE Signal Processing: Algorithms, Architectures, Arrangements, and Applications, SPA 2023, Poznan, Poland, 20 - 22 September 2023, vol.2023-September, pp.118-123

- III. **Threat Detection in X-ray Baggage Security Imagery Using Convolutional Neural Networks**
Altindag E. E., YÜKSEL ERDEM S. E.
Conference on Anomaly Detection and Imaging with X-Rays (ADIX) VII, ELECTR NETWORK, 3 April - 12 June 2022, vol.12104
- IV. **Mucilage Detection from Hyperspectral and Multispectral Satellite Data**
Abaci B., Dede M., YÜKSEL ERDEM S. E., YILMAZ M.
Conference on Algorithms, Technologies, and Applications for Multispectral and Hyperspectral Imaging XXVIII, ELECTR NETWORK, 3 April - 12 June 2022, vol.12094
- V. **Target Detection over Temperature Profiles**
Belenoglu I., Yalcin M., Yuksel S. E., Koz A.
2022 IEEE International Geoscience and Remote Sensing Symposium, IGARSS 2022, Kuala-Lumpur, Malaysia, 17 - 22 July 2022, vol.2022-July, pp.1237-1240
- VI. **Analysis and Detection of Mucilage Bloom from Multispectral Satellite Images Multispektral Uydu Görüntülerinden Müsilaj Oluşumlarının Analizi ve Tespiti**
Kucuk S., Abaci B., Dede M., Yuksel S. E., Yilmaz M.
30th Signal Processing and Communications Applications Conference, SIU 2022, Safranbolu, Turkey, 15 - 18 May 2022
- VII. **Defect Classification from Electronic Card Images by Deep Learning Elektronik Kart Görüntülerinden Derin Öğrenme ile Kusur Siniflandirmasi**
Eryilmaz M., Cil M., Akturk S., Tilegi M., Tirak H., YILMAZ A., Yuksel S. E., GÖKCEN D.
30th Signal Processing and Communications Applications Conference, SIU 2022, Safranbolu, Turkey, 15 - 18 May 2022
- VIII. **Deep Learning in Remote Sensing**
YÜKSEL M. E., ERDEM M. E., YÜKSEL S. E.
X. Türkiye Ulusal Fotogrametri ve Uzaktan Algılama Birliği (TUFUAB) Teknik Sempozyumu, Aksaray, Turkey, 25 - 27 April 2019
- IX. **A Standalone Open-Source System for Optical Inspection of Printed Circuit Boards**
ÜLGER F., Yuksel S. E.
23rd IEEE Conference on Signal Processing Algorithms, Architectures, Arrangements, and Applications (SPA), Poznan, Poland, 18 - 20 September 2019, pp.105-110
- X. **Deep Canonical Correlation Analysis for Hyperspectral Image Classification**
TOKER K. G., Yuksel S. E.
Conference on Remote Sensing of the Ocean, Sea Ice, Coastal Waters, and Large Water Regions held at SPIE Remote Sensing Conference, Strasbourg, France, 9 - 10 September 2019, vol.11150
- XI. **Transfer Learning on GPR Data for IED Detection in Various Environments**
Yuksel S. E., Oturak M., TOKER K. G.
Conference on Electro-Optical Remote Sensing XIII, Strasbourg, France, 9 - 10 September 2019, vol.11160
- XII. **Transfer and Multitask Learning using Convolutional Neural Networks for Buried Wire Detection from Ground Penetrating Radar Data**
Aydin E., YÜKSEL ERDEM S. E.
Conference on Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXIV, Maryland, United States Of America, 15 - 17 April 2019, vol.11012
- XIII. **IMAGE FUSION FOR HYPERSPECTRAL IMAGE SUPER-RESOLUTION**
Irmak H., AKAR G., Yuksel S. E.
9th Workshop on Hyperspectral Image and Signal Processing - Evolution in Remote Sensing (WHISPERS), Amsterdam, Netherlands, 23 - 26 September 2018
- XIV. **A Greedy Algorithm for Sparse Unmixing**
TOKER K. G., Yuksel S. E.
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- XV. **Transfer and Multitask Learning Method for Buried Wire Detection via GPR**
Aydin E., Yuksel S. E.

- 26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- XVI. Fusion of Hyperspectral Image and LiDAR Data and Classification using Deep Convolutional Neural Networks**
Salman M., Yuksel S. E.
- 26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- XVII. Buried Target Detection with Ground Penetrating Radar Using Deep Learning Method**
Aydin E., YÜKSEL ERDEM S. E.
- 25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- XVIII. Fusion Based Resolution Enhancement in Hyperspectral Images**
Irmak H., AKAR G., YÜKSEL ERDEM S. E.
- 25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- XIX. LiDAR Aided Hyperspectral Images Segmentation Using Schroedinger Eigenmaps**
Torun O., YÜKSEL ERDEM S. E.
- 25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- XX. SUPER-RESOLUTION RECONSTRUCTION OF HYPERSPECTRAL IMAGES VIA AN IMPROVED MAP-BASED APPROACH**
Irmak H., AKAR G., YÜKSEL ERDEM S. E., Aytaylan H.
- 36th IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Beijing, China, 10 - 15 July 2016, pp.7244-7247
- XXI. Fusion of KLMS and Blob Based Pre-Screener for Buried Landmine Detection Using Ground Penetrating Radar**
Baydar B., AKAR G., YÜKSEL ERDEM S. E., Ozturk S.
- Conference on Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XXI, Maryland, United States Of America, 18 - 21 April 2016, vol.9823
- XXII. Hyperspectral Image Segmentation Using Normalized Cuts**
Torun O., YÜKSEL ERDEM S. E.
- 24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1717-1720
- XXIII. Hyperspectral Imagery Superresolution**
Irmak H., AKAR G., YÜKSEL ERDEM S. E.
- 24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1057-1060
- XXIV. Hyperspectral Data Classification using Deep Convolutional Neural Networks**
Salman M., YÜKSEL ERDEM S. E.
- 24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.2129-2132
- XXV. SEMATIC SEGMENTATION OF HYPERSPECTRAL IMAGES WITH THE FUSION OF LIDAR DATA**
Aytaylan H., YÜKSEL ERDEM S. E.
- 36th IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Beijing, China, 10 - 15 July 2016, pp.2522-2525
- XXVI. Target Detection in Hyperspectral Images**
Karakaya A., YÜKSEL ERDEM S. E.
- 24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1501-1504
- XXVII. Analyzing the Correlation of Sky-View Factor and Shadow Regions in Hyperspectral Data**
Oduncu E., YÜKSEL ERDEM S. E.
- 24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1989-1992
- XXVIII. Fusion of forward-looking infrared camera and down-looking ground penetrating radar for buried target detection**
YÜKSEL ERDEM S. E., AKAR G., Ozturk S.

Conference on Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XX, Maryland, United States Of America, 20 - 23 April 2015, vol.9454

XXIX. Aircraft Recognition from Satellite Images

Oturak M., YÜKSEL ERDEM S. E.

23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015, pp.719-722

XXX. Effect of endmember clustering on proportion estimation: Results on the Share 2012 dataset

Gunes E., YÜKSEL ERDEM S. E.

Conference on Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XXI, Maryland, United States Of America, 21 - 23 April 2015, vol.9472

XXXI. Locating the Shadow Regions in LiDAR Data: Results on the SHARE 2012 Dataset

Boyaci M., YÜKSEL ERDEM S. E.

Conference on Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XXI, Maryland, United States Of America, 21 - 23 April 2015, vol.9472

XXXII. A MAP-BASED APPROACH TO RESOLUTION ENHANCEMENT OF HYPERSPECTRAL IMAGES

Irmak H., AKAR G., YÜKSEL ERDEM S. E.

7th Workshop on Hyperspectral Image and Signal Processing - Evolution in Remote Sensing (WHISPERS), Tokyo, Japan, 2 - 05 June 2015

XXXIII. LWIR and MWIR Images Dimension Reduction and Anomaly Detection with Locally Linear Embedding

Aydogdu A. S., Hatipoglu P. U., Ozparlak L., YÜKSEL ERDEM S. E.

23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015, pp.819-822

XXXIV. COMPARISON OF RX-BASED ANOMALY DETECTORS ON SYNTHETIC AND REAL HYPERSPECTRAL DATA

KÜÇÜK S., YÜKSEL ERDEM S. E.

7th Workshop on Hyperspectral Image and Signal Processing - Evolution in Remote Sensing (WHISPERS), Tokyo, Japan, 2 - 05 June 2015

XXXV. Accelerating Classification Time in Hyperspectral Images

TOKER K. G., YÜKSEL ERDEM S. E.

23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015, pp.2126-2129

XXXVI. Endmember Detection using Enhanced Constrained Optimization in Hyperspectral Imaging

YÜKSEL ERDEM S. E.

22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1023-1026

Supported Projects

YÜKSEL ERDEM S. E., TUBITAK Project, Hiperspektral Görüntüler ile LiDAR Verilerinin Kaynaştırılması, 2015 - Continues
MUTLU A., LİVANELİOĞLU A., KARADUMAN A. A., ALKAN H., TOPRAK E. O., BİTİRGEN O. B., YEKEBAĞCI İ. B., ARSLAN C.,
YÜKSEL S. E., YARDIMCI B. N., Project Supported by Higher Education Institutions, SEREBRAL PALSİLİ ÇOCUKLARDA
SANAL GERÇEKLİK SİSTEMİNİN GERÇEKLEŞTİRİLMESİ, 2017 - 2018

YÜKSEL ERDEM S. E., Project Supported by Higher Education Institutions, ICCV2017 Katılım ve Bilgisayarlı Görüde Son
Gelişmeler, 2017 - 2017

YÜKSEL ERDEM S. E., Other International Funding Programs, Algorithm Development for a Hyperspectral Camera, 2017
- 2017

YÜKSEL ERDEM S. E., Project Supported by Higher Education Institutions, ICCV 2015 Konferansına Yayına Bağlı Katılım
ve Bilgisayarlı Görü Alanında Yeni Araştırmaların Takibi, 2015 - 2016

YÜKSEL ERDEM S. E., Project Supported by Higher Education Institutions, Eurasia Graphics 2015 Konferansına Katılım

ve Bilgisayarlı Görüde Yenilikçi Teknolojilerin Araştırılması, 2015 - 2016

YÜKSEL ERDEM S. E., KÜÇÜK S., AKAR G., IRMAK H., Project Supported by Higher Education Institutions, Yapay ve gerçek hiperspektral veriler üzerinde RXTabanlı anomali bulucuların karşılaştırılması, 2015 - 2015

Metrics

Publication: 58

Citation (WoS): 57

Citation (Scopus): 19

H-Index (WoS): 3

H-Index (Scopus): 1