

## Personal Information

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## Education Information

Doctorate, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektronik Ve Haberleşme Mühendisliği Anabilim Dalı, Turkey  
2010 - 2013

Post Graduate, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Ve Elektronik Mühendisliği (Y) (Tezli),  
Turkey 2007 - 2010

Under Graduate, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, Turkey  
2003 - 2007

## Dissertations

Doctorate, Hiper spektral görüntüler için uzamsal yaklaşımlar, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektronik Ve  
Haberleşme Mühendisliği Anabilim Dalı, 2013

Post Graduate, Rotation, scale and rotation invariant automatic target recognition using template matching for satellite  
imagery, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Ve Elektronik Mühendisliği (Y) (Tezli), 2010

## Research Areas

Remote sensing, Image and Video Processing

## Academic Titles / Tasks

Assistant Professor, Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2018 -  
Continues

Assistant Professor, Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2014 -  
2018

Research Assistant, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektronik Ve Haberleşme Mühendisliği Anabilim Dalı,  
2010 - 2013

## Courses

BİLGİSAYARLA GÖRÜYE GİRİŞ, Under Graduate, 2016 - 2017

DİJİTAL SİGNAL PROCESSİNG, Under Graduate, 2016 - 2017

LİNEER CEBİR VE MÜHENDİSLİK UYGULAMALARI, Under Graduate, 2016 - 2017

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Activities of the GRSS Turkey Chapter**

Erturk A., Kaya G. T. , Erten E., Kayabol K., Aptoula E.

IEEE GEOSCIENCE AND REMOTE SENSING MAGAZINE, vol.6, pp.93-95, 2018 (Journal Indexed in SCI)

- **Sparse Unmixing With Dictionary Pruning for Hyperspectral Change Detection**

ERTÜRK A., İordache M., Plaza A.

IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING, vol.10, pp.321-330, 2017 (Journal Indexed in SCI)

- **AUTOMATED CO-REGISTRATION OF SATELLITE IMAGES THROUGH LUMINANCE TRANSFORMATION**  
Gercek D., ÇEŞMECİ D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.  
PHOTOGRAMMETRIC RECORD, vol.31, pp.407-427, 2016 (Journal Indexed in SCI)
- **The Second GRSS Turkey Chapter Summer School**  
Erten E., Taskin G., ERTÜRK A., Tasdemir K.  
IEEE GEOSCIENCE AND REMOTE SENSING MAGAZINE, vol.4, pp.76-78, 2016 (Journal Indexed in SCI)
- **Ground-Based Panoramic Stereo Hyperspectral Imaging System With Multiband Stereo Matching**  
KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.  
IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING, vol.9, pp.3926-3940, 2016 (Journal Indexed in SCI)
- **Sparse Unmixing-Based Change Detection for Multitemporal Hyperspectral Images**  
ERTÜRK A., İordache M., Plaza A.  
IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING, vol.9, pp.708-719, 2016 (Journal Indexed in SCI)
- **Enhanced Unmixing-Based Hyperspectral Image Denoising Using Spatial Preprocessing**  
Erturk A.  
IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING, vol.8, pp.2720-2727, 2015 (Journal Indexed in SCI)
- **Informative Change Detection by Unmixing for Hyperspectral Images**  
Erturk A., Plaza A.  
IEEE GEOSCIENCE AND REMOTE SENSING LETTERS, vol.12, pp.1252-1256, 2015 (Journal Indexed in SCI)
- **Spatial Resolution Enhancement of Hyperspectral Images Using Unmixing and Binary Particle Swarm Optimization**  
ERTÜRK A., GÜLLÜ M. K. , ÇEŞMECİ D., Gercek D., ERTÜRK S.  
IEEE GEOSCIENCE AND REMOTE SENSING LETTERS, vol.11, pp.2100-2104, 2014 (Journal Indexed in SCI)
- **Endmember Extraction Guided by Anomalies and Homogeneous Regions for Hyperspectral Images**  
ERTÜRK A., ÇEŞMECİ D., GÜLLÜ M. K. , Gercek D., ERTÜRK S.  
IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING, vol.7, pp.3630-3639, 2014 (Journal Indexed in SCI)
- **Hyperspectral image classification using empirical mode decomposition with spectral gradient enhancement**  
ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.  
IEEE Transactions on Geoscience and Remote Sensing, vol.51, pp.2787-2798, 2013 (Journal Indexed in SCI)
- **Unsupervised segmentation of hyperspectral images using modified phase correlation**  
Ertuerk A., Ertuerk S.  
IEEE GEOSCIENCE AND REMOTE SENSING LETTERS, vol.3, pp.527-531, 2006 (Journal Indexed in SCI)
- **Two-bit transform for binary block motion estimation**  
Erturk A., Erturk S.  
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, vol.15, pp.938-946, 2005 (Journal Indexed in SCI)

## Articles Published in Other Journals

- **Review and Performance Comparison of Pansharpening Algorithms for RASAT Images**  
Kahraman S., ERTÜRK A.  
ISTANBUL UNIVERSITY-JOURNAL OF ELECTRICAL AND ELECTRONICS ENGINEERING, vol.18, pp.109-120, 2018 (Journal Indexed in ESCI)
- **Kamuflej Tespiti için Hiperspektral Görüntüleme**  
KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.  
EMO bilimsel dergi (SAVTEK özel sayısı), vol.3, pp.35-39, 2013

- **Hiperspektral Görüntüleme ve Görüntü İşlemenin Bugünü Yakın Geleceği ve Mevcut Araştırma Eğilimleri**  
GERÇEK D., ÇEŞMECİ D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.  
XYZ Dergi, 2013 (Other Refereed National Journals)
- **Accuracy Improvement and Evaluation Measures for Registration of Multisensor Remote Sensing Imagery**  
GERÇEK D., ÇEŞMECİ D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.  
Journal of Geodesy and Geoinformation (JGG), vol.1, pp.97-103, 2012

## Refereed Congress / Symposium Publications in Proceedings

- **Unmixing Based Change Detection for Hyperspectral Images with Endmember Variability**  
ERTÜRK A.  
9th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS), 23 - 26 Eylül 2018
- **Graph Regularized L1/2-Sparsity Constrained Non-Negative Matrix Factorization for Hyperspectral and Multispectral Image Fusion**  
Kahraman S., ERTÜRK A., ERTÜRK S.  
9th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing, WHISPERS 2018, Amsterdam, Netherlands, 23 - 26 Eylül 2018
- **GÖKTÜRK-2 Alıcısı Üzerine Pankeskinleştirme Yaklaşımlarının Başarım Analizi**  
Kahraman S., ERTÜRK A.  
26. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SİU 2018), Turkey, 2 Mart - 05 Mayıs 2018
- **GÖKTÜRK-2 Görüntüleri için Patika Açma Tabanlı Yol Çıkarımı**  
Yeşilyurt G., ERTÜRK A.  
26. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SİU 2018), Turkey, 2 - 05 Mayıs 2018
- **GRAPH REGULARIZED L-1/2-SPARSITY CONSTRAINED NON-NEGATIVE MATRIX FACTORIZATION FOR HYPERSPECTRAL AND MULTISPECTRAL IMAGE FUSION**  
Kahraman S., ERTÜRK A., ERTÜRK S.  
9th Workshop on Hyperspectral Image and Signal Processing - Evolution in Remote Sensing (WHISPERS), Amsterdam, Netherlands, 23 - 26 Eylül 2018
- **BLOCK-BASED AND SEGMENTATION-BASED APPROACHES FOR COMPONENT SUBSTITUTION BASED HYPERSPECTRAL PANSHARPENING**  
Kahraman S., Yesilyurt G., ERTÜRK A., ERTÜRK S.  
38th IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Valencia, Spain, 22 - 27 Temmuz 2018, pp.8054-8057
- **ANOMALY PRESERVING CONTENT-AWARE HYPERSPECTRAL IMAGE SIZE REDUCTION**  
ERTÜRK A., ERTÜRK S.  
38th IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Valencia, Spain, 22 - 27 Temmuz 2018, pp.6368-6371
- **A Comprehensive Review of Pansharpening Algorithms for GÖKTÜRK-2 Satellite Images**  
Kahraman S., ERTÜRK A.  
ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences 4th International GeoAdvances Workshop, 14 - 15 Ekim 2017, vol.44, pp.263-270
- **RASAT Görüntüleri için Pankeskinleştirme Algoritmalarının Başarım Analizi**  
Kahraman S., ERTÜRK A.  
2017 25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, Turkey, 15 - 18 Mayıs 2017
- **Metric and Transform Performance Analysis for Hyperspectral Superpixel Segmentation**  
Yesilyurt G. N. , ERTÜRK A., ERTÜRK S.  
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 Mayıs 2017
- **SEAM CARVING FOR HYPERSPECTRAL IMAGE SIZE REDUCTION AND UNMIXING**  
ERTÜRK A., ERTÜRK S.

IEEE International Geoscience & Remote Sensing Symposium, Texas, United States Of America, 23 - 28 Temmuz 2017, pp.1752-1755

- **Superpixel Based Unmixing for Enhanced Hyperspectral Denoising**

ERTÜRK A.

8th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS), Los-Angeles, Chile, 21 Ağustos 2016

- **Sparse unmixing based denoising for hyperspectral images**

ERTÜRK A.

2016 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Beijing, China, 10 - 15 Temmuz 2016, pp.7006-7009

- **Hiperspektral Görüntülerde Süperpiksel Tabanlı Karışım Giderimi ile Gürültü Giderimi**

ERTÜRK A.

24. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SIU 2016), Zonguldak, Turkey, Turkey, 16 - 19 Mayıs 2016, pp.2189-2192

- **UNMIXING WITH SLIC SUPERPIXELS FOR HYPERSPECTRAL CHANGE DETECTION**

ERTÜRK A., ERTÜRK S., Plaza A.

36th IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Beijing, China, 10 - 15 Temmuz 2016, pp.3370-3373

- **Unmixing Based Denoising and Anomalous Endmember Detection**

ERTÜRK A.

IEEE International Geoscience and Remote Sensing Symposium (IGARSS) 2015, 26 - 31 Temmuz 2015

- **Sparse Unmixing for Hyperspectral Change Detection**

ERTÜRK A., Plaza A.

IEEE International Geoscience and Remote Sensing Symposium (IGARSS) 2015, 26 - 31 Temmuz 2015

- **Local spectral gradient based gas detection in LWIR hyperspectral images**

ÇEŞMECİ D., KARACA A. C. , ERTÜRK A., ERTÜRK S.

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

- **Hybrid change detection approach in hyperspectral images**

KARACA A. C. , ÇEŞMECİ D., ERTÜRK A., ERTÜRK S.

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

- **Hyperspectral Change Detection by Sparse Unmixing with Dictionary Pruning**

ERTÜRK A., IORDACHE M. D. , Plaza A.

7th Workshop on Hyperspectral Image and Signal Processing (WHISPERS 2015), 2 - 05 Haziran 2015

- **Hyperspectral Change Detection with Stereo Disparity Information Enhancement**

KARACA A. C. , ÇEŞMECİ D., ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.

IEEE 6th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS), Switzerland, 24 - 27 July 2014

- **Stereo Hiperspektral Görüntüleme**

KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.

7. Savunma Teknolojileri Kongresi (SAVTEK 2014), Ankara, Turkey, 25 - 26 June 2014

- **Design of a hyperspectral imaging spectrometer for visible and near infrared region applications**

ÇIRPICI U., KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.

2014 22nd Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, Turkey, 23 - 25 April 2014

- **Hyperspectral change detection based on Multi band Census Transform**

ÇEŞMECİ D., KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.

2014 22nd Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, Turkey, 23 - 25 April 2014

- **A NOVEL PANORAMIC STEREO HYPERSPECTRAL IMAGING SYSTEM**

Karaca A. C. , ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.

6th International Symposium on Communications, Control and Signal Processing (ISCCSP), Athens, Greece, 21 -

23 Mayıs 2014, pp.145-148

- **HYPERSPECTRAL CHANGE DETECTION BY MULTI-BAND CENSUS TRANSFORM**  
ÇEŞMECİ D., KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.  
IEEE Joint International Geoscience and Remote Sensing Symposium (IGARSS) / 35th Canadian Symposium on Remote Sensing, Quebec City, Canada, 13 - 18 Temmuz 2014, pp.2969-2972
- **Integrating anomaly detection to spatial preprocessing for endmember extraction of hyperspectral images**  
ERTÜRK A., Cesmeci D., Gercek D., GÜLLÜ M. K. , ERTÜRK S.  
2013 33rd IEEE International Geoscience and Remote Sensing Symposium, IGARSS 2013, Melbourne, Australia, 21 - 26 Temmuz 2013, pp.1087-1090
- **Automatic Waste Sorting using Shortwave Infrared Hyperspectral Imaging System**  
KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ELMAS M., ERTÜRK S.  
IEEE 5th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS), 25 Temmuz - 28 Eylül 2013
- **Unmixing-based fusion of hyperspectral images for classification Hiperspektral görüntülerin sınıflandırılmasında katışım temelli kaynaştırma**  
Çeşmeci D., Gerçek D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.  
2013 21st Signal Processing and Communications Applications Conference, SIU 2013, Haspolat, Turkey, 24 - 26 Nisan 2013
- **Unmixing-based fusion of hyperspectral images with high spatial resolution images Hiperspektral görüntüler ile yüksek çözünürlüklü görüntülerin spektral katisim temelli kaynaştırılması**  
Gerçek D., Çesmecici D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.  
2013 21st Signal Processing and Communications Applications Conference, SIU 2013, Haspolat, Turkey, 24 - 26 Nisan 2013
- **Anomaly and homogeneous region guided endmember extraction for hyperspectral images Hiperspektral görüntüler için anomali ve homojen bölge gözeten son eleman çıkarımı**  
ERTÜRK A., Çesmecici D., Gerçek D., GÜLLÜ M. K. , ERTÜRK S.  
2013 21st Signal Processing and Communications Applications Conference, SIU 2013, Haspolat, Turkey, 24 - 26 Nisan 2013
- **Hiperspektral Görüntüleme ile Kamuflej Tespiti**  
KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ELMAS M., ERTÜRK S.  
6. Savunma Teknolojileri Kongresi (SAVTEK 2012), Ankara, Turkey, 20 - 22 June 2013
- **Plastic waste sorting using infrared hyperspectral imaging system**  
KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.  
2013 21st Signal Processing and Communications Applications Conference (SIU), Haspolat, Turkey, 24 - 26 Nisan 2013
- **Unmixing-based Fusion of Hyperspectral Images with High Spatial Resolution Images**  
Gercek D., Cesmeci D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.  
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 Nisan 2013
- **Anomaly and Homogeneous Region Guided Endmember Extraction for Hyperspectral Images**  
ERTÜRK A., Cesmeci D., Gercek D., GÜLLÜ M. K. , ERTÜRK S.  
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 Nisan 2013
- **Unmixing-based Fusion of Hyperspectral Images for Classification**  
Cesmeci D., Gercek D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.  
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 Nisan 2013
- **An automated fine registration of multisensor remote sensing imagery**  
Gerçek D., Çeşmeci D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.  
2012 32nd IEEE International Geoscience and Remote Sensing Symposium, IGARSS 2012, Munich, Germany, 22 - 27 Temmuz 2012, pp.1361-1364
- **Hyperspectral image classification with spectral gradient enhancement for empirical mode decomposition**  
ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.  
2012 32nd IEEE International Geoscience and Remote Sensing Symposium, IGARSS 2012, Munich, Germany, 22

- 27 Temmuz 2012, pp.4162-4165

- **Analysis of evidence in forensic documents using hyperspectral imaging system**

KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ELMAS M., ERTÜRK S.

2012 20th Signal Processing and Communications Applications Conference (SIU), Mugla, Turkey, Turkey, 18 - 20 April 2012

- **Image registration with luminance transform operation Parlaklık dönüşüm işlemi ile imge çakiştirma**

Çeşmeci D., Gerçek D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.

2012 20th Signal Processing and Communications Applications Conference, SIU 2012, Fethiye, Mugla, Turkey, 18 - 20 Nisan 2012

- **Empirical mode decomposition based approach with spectral enhancement for hyperspectral image classification Hiperspektral görüntü sınıflandırması için spektral iyileştirmeli ampirik kip ayırıştırması tabanlı yaklaşım**

ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.

2012 20th Signal Processing and Communications Applications Conference, SIU 2012, Fethiye, Mugla, Turkey, 18 - 20 Nisan 2012

- **An automated approach for registration of multisensor/multi-resolution imagery Farkli alicilardan elde edilen farkli çözünürlüklü uydu görüntülerinin çakiştirilmesinde otomatik bir yaklaşım**

Gerçek D., Çeşmeci D., GÜLLÜ M. K. , ERTÜRK A., ERTÜRK S.

2012 20th Signal Processing and Communications Applications Conference, SIU 2012, Fethiye, Mugla, Turkey, 18 - 20 Nisan 2012

- **COMPARATIVE EVALUATION OF VECTOR MACHINE BASED HYPERSPECTRAL CLASSIFICATION METHODS**

KARACA A. C. , ERTÜRK A., GÜLLÜ M. K. , ERTÜRK S.

IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Munich, Germany, 22 - 27 Temmuz 2012, pp.4970-4973

## Supported Projects

Ertürk A., TUBITAK Project, Hiperspektral Görüntülerde Kaynaştırma ile Uzamsal Çözünürlük Artırımı için Karışım Giderimi Temelli Yaklaşımlar, 2016 - 2018

Ertürk A., TUBITAK Project, HIPSTER Hiperspektral panoramik stereo temelli görüntüleme sistemi, 2013 - 2014

Ertürk A., Çelebi A., TUBITAK Project, Electro Optic Range Finder, 2012 - 2013

ERTÜRK A., GERÇEK KURT D., GÜLLÜ M. K. , TUBITAK Project, Hiperspektral görüntülerde piksel altı yaklaşımlarla sınıflandırma başarımının artırılması (1001 - Bilimsel ve Teknolojik Araştırma Projesi), 2011 - 2013

## Tasks In Event Organizations

Ertürk A., Uydu Yer Gözlem Uygulamaları (UYGU) Yaz Okulu 2018, Science / Art Camp or Summer School Organization, Kocaeli, Turkey, Haziran 2018 Haziran 2018

Ertürk A., Uydu Yer Gözlem Uygulamaları (UYGU) Yaz Okulu 2016, Science / Art Camp or Summer School Organization, İstanbul, Turkey, Haziran 2016 Haziran 2016

## Citations

Total Citations (WOS):274

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