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EDUCATION

2007-Present: Ph.D, Kocaeli University, Electronics and Telecom. Eng., Turkey
2005-2007: M.Sc, Kocaeli University, Electronics and Telecom. Eng., Turkey
2001-2005: B.Sc, Kocaeli University, Electronics and Telecom. Eng., Turkey

EXPERIENCE

June 2005 – Present: Kocaeli University Laboratory of Image and Signal Processing
Summer 2004: Siemens, Kartal, Turkey
Summer 2003: Türk Telekom, Kocaeli, Turkey

ACADEMIC EXPERIENCE

January 2006 – Present: Research Assistant, University of Kocaeli, Electronics and Telecom.
Eng. Dept, Turkey.
03.2009-09.2009
Visiting Researcher Remote Sensing Laboratory, University of Trento, Trento, Italy

AWARDS / HONORS

1. Awarded with Academic Encouragement Prize (which is given according to the number of SCI papers obtained as a first author) by University of Kocaeli, 2010 (the list is announced for now)
2. Supported by the International Research Fellowship Programme of The Scientific and Technological Research Council of Turkey (TÜBİTAK), 2009
3. Awarded with Student Author Participation Grant by IEEE International Conference on Image Processing Committee, 2009
4. Awarded with Academic Encouragement Prize (which is given according to the number of SCI papers obtained as a first author) by University of Kocaeli, 2008
5. Ranked **2st** in academic research evaluation among research assistants of University of Kocaeli, Engineering Faculty, Turkey, 2007.
6. Ranked **5th** in academic research evaluation among research assistants of University of Kocaeli, Engineering Faculty, Turkey, 2006.

RESEARCH PROJECTS

- 1-“Hyperspectral Classification, Segmentation and Recognition”, Supported by the Turkish Scientific and Technical Research Council (TUBITAK), under contract EEEAG/107E011. Project Researcher. (2007-2009)
- 2-“Optimal Filtering Based Multiple Description Coding”, Supported by the Turkish Scientific and Technical Research Council (TUBITAK), under contract EEEAG/107E155. Project Researcher. (2007-2009)
- 3-“Hyperspectral Data Classification, Recognition and Displaying In Multiview Auto-Stereoscopic Display”, Supported by the KOU Scientific Projects Unit, KOÜ 2007/45. Project Researcher.(2007-2008)
- 4-“Computer Aided Visual Documentation, Archiving Systems, Image and Video Indexing, Video Transmission and Multimedia Databases for E-Government”, Supported by DPT, under contract 2004K120720. Project Researcher.(2004-2006)

PUBLICATIONS

A) INTERNATIONAL JOURNALS (SCI, SCI-EXP)

1. **B. Demir**, C. Persello, L. Bruzzone “Batch mode active learning methods for the interactive classification of remote sensing images” (under review).
2. **B. Demir**, S. Ertürk “Empirical mode decomposition of hyperspectral images for support vector machine classification“ (under review).
3. **B. Demir**, S. Ertürk, M. K. Güllü “Hyperspectral image classification using wavelet shrinkage denoising of intrinsic mode functions” (under review).
4. **B. Demir**, S. Ertürk, “Clustering based Extraction of Border Training Patterns for Accurate SVM Classification of Hyperspectral Images”, IEEE Geoscience and Remote Sensing Letters, vol. 6, no. 4, pp. 840-844, Oct 2009

5. **B. Demir**, A. Çelebi, S. Ertürk, “A Low-Complexity Approach for Color Display of Hyperspectral Remote-Sensing Images Using One-Bit Transform Based Band Selection”, *IEEE Transactions on Geoscience and Remote Sensing*, vol. 47, no. 1, pp. 97-105, January 2009.
6. Y. Yapıcı, **B. Demir**, S. Ertürk, O. Urhan, “Down-sampling Based Multiple Description Image Coding using Optimal Filtering”, *Journal of Electronic Imaging*, Vol. 17, No. 3, Article ID 033018, July 2008.
7. **B. Demir**, S. Ertürk, “Improved Classification and Segmentation of Hyperspectral Images Using Spectral Warping”, *International Journal of Remote Sensing*, vol. 29, pp. 3657-3663, June 2008.
8. **B. Demir**, S. Ertürk, “Phase Correlation based Redundancy Removal in Feature Weighting Band Selection for Hyperspectral Images”, *Int. Journal of Remote Sensing*, no. 29, pp. 1801-1807, 2008.
9. **B. Demir**, S. Ertürk, “Hyperspectral Image Classification Using Relevance Vector Machines”, *IEEE Geoscience and Remote Sensing Letters*, Vol. 4, No. 4, pp. 586-590, Oct 2007.
10. **B. Demir**, S. Ertürk, “Block Motion Estimation Using Adaptive Modified Two-Bit Transform”, *IET Image Processing*, Vol. 1, No. 2, pp. 215-222, June 2007.

B) INTERNATIONAL CONFERENCE

1. **B. Demir**, S. Ertürk, “Empirical Mode Decomposition Based Decision Fusion for Higher Hyperspectral Image Classification Accuracy”, *International Conference on Geoscience and Remote Sensing Symposium*, Honolulu, Hawaii, USA, July 2010, Accepted for publication.
2. **B. Demir**, S. Ertürk, “Improving SVM Classification Accuracy Using a Hierarchical Approach for Hyperspectral Images”, *IEEE International Conference on Image Processing*, Nov 2009, Cairo, Egypt.
3. **B. Demir**, S. Ertürk, O. Urhan, “Improved Quality Multiple Description 3D Mesh Coding with Optimal Filtering”, *IEEE International Conference on Image Processing*, Nov 2009, Cairo, Egypt.
4. **B. Demir**, S. Ertürk, “Accurate SVM Classification Using Border Training Patterns”, *First Workshop on Hyperspectral Image and Signal Processing: Evolution on Remote Sensing*, August 2009, Grenoble, France.
5. **B. Demir**, S. Ertürk, “An Empirical Mode Decomposition and Composite Kernel Approach to Increase Hyperspectral Image Classification Accuracy”, *International Conference on Geoscience and Remote Sensing Symposium*, Cape Town, South Africa, July 2009.
6. **B. Demir**, S. Ertürk, “Increasing Hyperspectral Image Classification Accuracy for Data Sets with Limited Training Samples by Sample Interpolation”, *4th International Conference on Recent Advances in Space Technologies (RAST2009)*, June 2009
7. **B. Demir**, S. Ertürk, M. K. Güllü, “Wavelet Shrinkage Denoising of Intrinsic Mode Functions of Hyperspectral Image Bands for Classification with High Accuracy”, *International Conference on Geoscience and Remote Sensing Symposium*, Cape Town, South Africa, July 2009.

8. **B. Demir**, S. Ertürk, “Improved Hyperspectral Image Classification with Noise Reduction Pre-Process”, European Signal Processing Conference (EUSIPCO-2008), Lausanne, Switzerland, Aug 2008
9. **B. Demir**, S. Ertürk, “Spectral Magnitude and Spectral Derivative Feature Fusion for Improved Classification of Hyperspectral Images”, International Conference on Geoscience and Remote Sensing Symposium, Boston, Massachusetts, U.S.A, pp. II-1020-II-1023, July 2008.
10. **B. Demir**, S. Ertürk, “Reducing the Computational Load of Hyperspectral Band Selection using the One-Bit Transform of Hyperspectral Bands”, International Conference on Geoscience and Remote Sensing Symposium, Boston, Massachusetts, U.S.A, pp. II-919-II-922, July 2008.
11. **B. Demir**, S. Ertürk, “Empirical Mode Decomposition Pre-Process for Higher Accuracy Hyperspectral Image Classification”, International Conference on Geoscience and Remote Sensing Symposium, Boston, Massachusetts, U.S.A, pp. II-939-II-941, July 2008.
12. Ç. Ateş, Y. Ürgün, **B. Demir**, O. Urhan, S. Ertürk, “Polyphase Downsampling Based Multiple Description Image Coding using Optimal Filtering with Flexible Redundancy Insertion”, IEEE International Conference on Signals and Electronic Systems, pp. 193-196, Sept. 2008.
13. **B. Demir**, S. Ertürk, “Phase Correlation Based Supervised Classification of Hyperspectral Images Using Multiple Class Representatives”, International Conference on Geoscience and Remote Sensing Symposium, 23-27 July 2007, Barcelona, Spain, pp. 2822-2824, July 2007.
14. **B. Demir**, S. Ertürk, “Hyperspectral Data Classification Using RVM with Pre-Segmentation and RANSAC”, International Conference on Geoscience and Remote Sensing Symposium, 23-27 July 2007, Barcelona, Spain, pp. 1763-1766, July 2007.
15. **B. Demir**, S. Ertürk, “Achieving More Sparsity in Hyperspectral SVM Classification Using Unsupervised Pre-segmentation in the Training Phase”, 3rd International Conference on Recent Advances in Space Technologies, Istanbul, TURKEY, pp. 271-274, June 2007.
16. **B. Demir**, S. Ertürk, “Block Motion Estimation using Modified Two-Bit Transform”, Lecture Notes in Computer Science (LNCS), Springer-Verlag, Vol. 4263, pp. 522-531, Nov 2006.

C) NATIONAL CONFERENCES

1. **B. Demir**, S. Ertürk, “Empirical Mode Decomposition Based Decision Fusion for Hyperspectral Image Classification”, IEEE 17th Signal Processing and Communications Applications Conference (SIU'2010), April 2010
2. **B. Demir**, S. Ertürk, “High Accuracy Hyperspectral Image Classification Based on Empirical Mode Decomposition and Composite Kernel”, IEEE 17th Signal Processing and Communications Applications Conference (SIU'2009), April 2009
3. A.T. Çelebi, **B. Demir**, M.K. Güllü, S. Ertürk, “Facial Feature Matched One-bit Transform for Face Recognition”, IEEE 16th Signal Processing and Communications Applications Conference (SIU'2008), April 2008
4. **B. Demir**, S. Ertürk, “Hiperspektral Görüntülemenin Savunma Teknolojileri Uygulamaları ve Spektral Eğriltme Sayesinde Yüksek Tanıma Başarımı”, 4th National Defense Technologies Conference (SAVTEK 2008), June 2008

5. **B. Demir**, S. Ertürk, “Hyperspectral Image Classification Based on Empirical Mode Decomposition”, IEEE 16th Signal Processing and Communications Applications Conference (SIU'2008), April 2008
6. Z. Kızıltoprak, **B. Demir**, B. Diri, “Ön-İşlem Kullanılarak Hiperspektral Görüntülerde İlgililik Vektör Makineleri ile Sınıflandırma Başarımının Arttırılması”, IEEE 16th Signal Processing and Communications Applications Conference (SIU'2008), April 2008
7. **B. Demir**, S. Ertürk, “Wavelet Denoising Before Support Vector Classification of Hyperspectral Images”, IEEE 15th Signal Processing and Communications Applications Conference (SIU'2007), June 2007
8. Y. Yapıcı, **B. Demir**, S. Ertürk, O. Urhan, “Downsampling Based Multiple Description Coding with Optimal Reconstruction Filters”, IEEE 15th Signal Processing and Communications Applications Conference (SIU'2007), June 2007
9. **B. Demir**, S. Ertürk, “Sparsity/accuracy trade-off for vector machine based hyperspectral classification”, IEEE 15th Signal Processing and Communications Applications Conference (SIU'2007), June 2007
10. İ. Yıldırım, **B. Demir**, S. Ertürk, “3-Dimensional Modeling and Visualization of Cultural Assets for E-Government”, IEEE Signal Processing and Communications Applications Conference (SIU'2006), April 2006
11. **B. Demir**, S. Ertürk, “Flexible Multiple Description 3-D Model Coding Using Wavelet Subdivision Surfaces”, IEEE Signal Processing and Communications Applications Conference (SIU'2006), April 2006

ATTENDED CONFERENCES

1. IEEE International Conference on Image Processing, 7-10 Nov 2009, Cairo, Egypt.
2. IEEE International Conference on Geosience and Remote Sensing Symposium, 7-12 July 2009, Cape town, South Africa
3. IEEE International Conference on Geosience and Remote Sensing Symposium, 6-11 July 2008, Boston, Massachusetts, U.S.A.
4. IEEE International Conference on Geosience and Remote Sensing Symposium, 23-27 July 2007, Barcelona, Spain.
5. IEEE 3rd International Conference on Recent Advances in Space Technologies, 14-16 June 2007, Istanbul, Turkey.
6. 4th National Defense Technologies Conference, 26-27 June 2008, Ankara, Turkey
7. IEEE 16th Signal Processing and Communications Applications Conference, 20-22 April 2008, Didim, Turkey.
8. IEEE 15th Signal Processing and Communications Applications Conference, 11-13 June 2007, Eskişehir, Turkey.
9. IEEE 14th Signal Processing and Communications Applications Conference, 17-19 April 2006, Antalya, Turkey.