

CURRICULUM VITAE

BEGUM DEMIR

Date of Birth: 04.01.1984
Nationality : Republic of Turkey
Address : Dipartimento di Ingegneria e Scienza dell'Informazione Università degli Studi di Trento, Via Sommarive, 9 I-38123 Trento, Italy
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1. ACADEMIC EXPERIENCE

2013-Present Assistant Prof, Department of Information Engineering and Computer Science, University of Trento, Trento, Italy.

2010-2013: Post-Doc. Researcher, Remote Sensing Laboratory, Department of Information Engineering and Computer Science, University of Trento, Trento, Italy.

2007 –2010: Ph.D, Kocaeli University, Electronics and Telecommunications Engineering, Turkey

2. SCIENTIFIC ACTIVITY

2.1. Research Areas:

- Image Processing
- Signal Processing
- Machine Learning
- Pattern Recognition
- Remote Sensing

2.2. Organization of Conferences and Workshops

- **Co-founder and General Chair** of the Image and Signal Processing for Remote Sensing Workshop organized within the IEEE Conference on Signal Processing and Communications Applications since 2014.
- **Reviewer** of IEEE International Geoscience and Remote Sensing Symposium Student Paper Contest submissions since 2015.

- **Program Committee Member** of SPIE Image and Signal Processing for Remote Sensing Conference, Toulouse, France, 21-24 September 2015.
- **Scientific Committee Member** of the International Workshop on the Analysis of Multi-temporal Remote Sensing Images, Annecy, France, 22-24 July, 2015.
- **Session Chair** at the IEEE International Geoscience and Remote Sensing Symposium, Milan, Italy, 27-31 July 2015.
- **Scientific Committee Member** of the IEEE 22th Conference on Signal Processing and Communications Applications, Trabzon, Turkey, 23-25 April 2014.
- **Program Committee Member** of SPIE Image and Signal Processing for Remote Sensing Conference, Amsterdam, Netherlands, 22 - 25 September 2014.
- **Organizer** for the Special Session on Remote Sensing Image Analysis in the IEEE 21st Conference on Signal Processing and Communications Applications, Girne, Turkish Republic of Northern Cyprus, 24-26 April 2013.
- **Session Chair** at the IEEE International Geoscience and Remote Sensing Symposium, Munich, Melbourne, Australia, 21-26 July 2013.
- **Session Chair** at the IEEE International Geoscience and Remote Sensing Symposium, Munich, Germany, 23-27 July 2012.
- **Scientific Committee Member** of the IEEE 20th Conference on Signal Processing and Communications Applications, Mugla, Turkey, 18-20 April 2012.
- **Organizer for the Special Session on Remote Sensing Image Analysis** in the IEEE 20th Conference on Signal Processing and Communications Applications, Mugla, Turkey, 18-20 April 2012.
- **Local Committee Member** of the 6th International Workshop on the Analysis of Multi-temporal Remote Sensing Images, Trento, Italy, 12-14 July 2011.
- **Session Chair** at the IEEE International Geoscience and Remote Sensing Symposium, Vancouver, Canada, 24-29 July 2011.
- **Organizer for the Special Session on Remote Sensing Image Analysis** in the IEEE 19th Conference on Signal Processing and Communications Applications, Antalya, Turkey, 20-22 April 2011.
- **Local Committee Member** of the IEEE 17th Conference on Signal Processing and Communications Applications, Antalya, Turkey, 9-11 April 2009.

2.3. Invited Talks

- Invited Speaker at the Universidade De Santiago De Compostela, Santiago De Compostela, Spain, October 2015. Title of the Talk: Advanced Techniques for Classification of Very High Resolution Remote Sensing Images.

- Invited Speaker at the Boğaziçi University, Istanbul, Turkey, May 2015. Title of the Talk: A Multiple Criteria Active Learning Method for Support Vector Regression.
- Invited Speaker at the Middle East Technical University, Ankara, Turkey, April, 2014. Title of the Talk: Recent Advances in Remote Sensing Single-Date and Time Series Image Classification.
- Invited Speaker at the University of Hacettepe, Ankara, Turkey, April, 2014. Title of the Talk: Advanced Techniques for Classification of Remote Sensing Images.

2.4. Member of Final Examination PhD Committee

- PhD degree at the “Centro de Investigación en Tecnoloías da Información”, in Universidade De Santiago De Compostela, Spain (2015), Student: Pablo Quesada Barriuso, Thesis title: Spectral-spatial classification of n-dimensional images in real-time based on segmentation and mathematical morphology on GPUs.
- PhD degree at the Department of Computer Science and Engineering in Tezpur University, India (2015), Student: Surender Varma Gadhira, Thesis title: Change Detection Techniques for Multi-Temporal Remote Sensing Images.
- PhD degree at the Centre of Studies in Resources Engineering in Indian Institute of Technology Bombay, India (2015), Student: Dibyajyoti Chutia, Thesis title: A study on classification of multispectral and hyperspectral satellite image using soft computing approach.
- PhD degree at the School “Facultat de Fisiques”, in University of Valencia, Spain (2014), Student: Emma Izquierdo-Verdiguier, Thesis title: Kernel Feature Extraction Methods for Remote Sensing Data Analysis.

2.5. Member of Final Examination MSc Committee (outside UniTN)

- MSc degree at the Faculty of Geo-Information Science and Earth Observation, in University of Twente, The Netherlands (2016), Student: John Ray Bergado, Thesis title: A Deep Feature Learning Approach to Urban Scene Classification.

2.6. Referee for

- IEEE Proceedings;
- IEEE Transactions on Geoscience and Remote Sensing;
- IEEE Transactions on Image Processing;
- IEEE Transactions on Circuits and Systems for Video Technology;
- Pattern Recognition;
- IEEE Geoscience and Remote Sensing Letters;
- Pattern Recognition Letters;
- IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing;
- IEEE Journal of Selected Topics in Signal Processing;
- IEEE Transactions on Systems, Man, and Cybernetics--Part C: Applications and Reviews;

- ISPRS Journal of Photogrammetry and Remote Sensing;
- Journal of Information Fusion;
- International Journal of Remote Sensing;
- Journal of Optical Engineering;
- Journal of Optics Express;
- European Signal Processing Conference;
- SPIE Image and Signal Processing for Remote Sensing Conference;
- International Workshop on the Analysis of Multi-temporal Remote Sensing Images;
- Signal Processing and Communications Applications Conference;
- International Geoscience and Remote Sensing Symposium.

3. TEACHING ACTIVITY

- **Lecturer** in Digital Signal Processing, Master in Telecommunication Engineering– University of Trento, 2015/2016.
- **Lecturer** in Remote Sensing Systems, BSc. in Telecommunication Engineering, University of Trento, 2015/2016.
- **Lecturer** for a short course in ‘Remote Sensing: Image Classification’, in Electrical and Electronics Engineering, Boğaziçi University, Turkey, 2015.
- **Lecturer** in Remote Sensing Systems, BSc. in Telecommunication Engineering, University of Trento, 2014/2015.
- **Lecturer** in Digital Signal Processing, Master in Telecommunication Engineering– University of Trento, 2014/2015.
- **Lecturer** in Digital Signal Processing, Master in Telecommunication Engineering– University of Trento, 2013/2014.
- **Lecturer** in Pattern Recognition, Master in Telecommunication Engineering– University of Trento, 2013/2014.
- **Lecturer** in Advanced Remote Sensing Systems for Environment, Master in Telecommunication Engineering– University of Trento, 2013/2014.
- **Teaching assistant** for Pattern Recognition course, Master in Telecommunication Engineering – University of Trento, 2011/2012.
- **Co-supervisor** of several Bachelor and Master theses in Telecommunication Engineering– University of Trento, Italy (2011-Present).
- **Co-supervisor** of several Bachelor theses and projects in Electronics and Communications Engineering – University of Kocaeli, Turkey (2006-2010).
- **Assisted the laboratories and applications of the following bachelor courses** in the Electronics and Telecommunications Engineering, University of Kocaeli, Turkey

(2006-2010):

- Telecommunications Laboratory-1
- Electronics Laboratory-1
- Measurement and Circuits Laboratory
- Introduction to Computers

4. RESEARCH PROJECTS AND INNOVATION

4.1. Involved in the following research projects:

- CRYOMON-SciPro – Improve the Science of Processes within the Cryosphere by Integrating Hydrological Modelling with Remote Sensing in a Multi-Level Data Fusion Approach (EUREGIO) (2016-2018)
- SEOM - Scientific Exploitation of Operational Missions - S2-4Sci Land and Water - Multi-temporal Analysis (European Space Agency) (2016-2017).
- “Product Feature extraction Analysis (European Space Agency)”, (2013-2015).
- “HiResAlp - An innovative framework for the Integration of multi-source data to determine soil moisture and evapotranspiration at high resolution in Alpine regions”, (2012-2015).
- “Mapping and the citizen sensor (ICT COST Action - European Union)”, (2012-2016).
- “Hyperspectral Classification, Segmentation and Recognition”, Supported by the Turkish Scientific and Technical Research Council (TUBITAK), (2007-2009).
- “Optimal Filtering Based Multiple Description Coding”, Supported by the Turkish Scientific and Technical Research Council (TUBITAK), (2007-2009)
- “Hyperspectral Data Classification, Recognition and Displaying In Multiview Auto-Stereoscopic Display”, Supported by the University of Kocaeli Scientific Projects Unit, (2007-2008).
- “Computer Aided Visual Documentation, Archiving Systems, Image and Video Indexing, Video Transmission and Multimedia Databases for E-Government”, Supported by Ministry of Development, (2004-2006).

4.2. Project Review and Spin-off:

- **Project Proposals Reviewer** in application for the PRESTIGE Marie Curie post-doc fellowships programme, 2016.
- **Project Proposals Reviewer** in Belgian Remote Sensing Research Programme for Earth Observation "STEREO III" (Support to Exploitation and Research in Earth

Observation), 2014.

- **Co-founder** of “PARS AR-GE”, which is a high-tech research and development spin off with expertise in vision systems, embedded systems, image processing, signal processing, hardware/software design, high-end research and development, product prototyping and development (<http://www.parsarge.com/index.html>).

5. AWARDS / HONORS

- **IEEE Senior Member** since March 2016.
- **Awarded with Fellowship** for Visiting Scientists by The Scientific and Technological Research Council of Turkey to organize the 1st Image and Signal Processing for Remote Sensing Workshop, April 2014.
- **Awarded with Student Author Participation Grant** by IEEE International Conference on Image Processing Organizing Committee, 2009.
- **Awarded by the International Research Fellowship Programme of The Scientific and Technological Research Council of Turkey** during her Ph.D to visit Remote Sensing Laboratory, University of Trento, 2009.
- **Awarded with Academic Encouragement Prize** (which is given according to the number of SCI papers obtained as a first author) by University of Kocaeli, Turkey, 2008.
- **Ranked 2nd in academic research evaluation among research assistants** of University of Kocaeli, Engineering Faculty, Turkey, 2007.
- **Selected as the honors student** (due to the high marks in the considered courses) by Engineering Faculty, University of Kocaeli, Turkey, 2005.

6. BIBLIOMETRICS DATA

h-index:	13
Number of citations:	732
Source:	GoogleScholar @ http://scholar.google.it/citations?user=gAmLRWwAAAAJ&hl=it

7. PUBLICATIONS

7.1. INTERNATIONAL JOURNALS

1. **B. Demir**, S. Ertürk, “Block motion estimation using adaptive modified two-bit transform”, IET Image Processing, vol.1, no.2, pp. 215-222, 2007.

2. **B. Demir**, S. Ertürk, "Hyperspectral image classification using relevance vector machines", *IEEE Geoscience and Remote Sensing Letters*, vol.4, no.4, pp. 586-590, 2007.
3. **B. Demir**, S. Ertürk, "Phase correlation based redundancy removal in feature weighting band selection for hyperspectral images", *International Journal of Remote Sensing*, vol.29, no.6, pp. 1801-1807, 2008.
4. **B. Demir**, S. Ertürk, "Improved classification and segmentation of hyperspectral images using spectral warping", *International Journal of Remote Sensing*, vol.29, no.12, pp. 3657-3663, 2008.
5. 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, 2008.
6. **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, 2009.
7. **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, 2009.
8. **B. Demir**, S. Ertürk "Empirical mode decomposition of hyperspectral images for support vector machine classification", *IEEE Transactions on Geoscience and Remote Sensing*, vol.48, no.11, pp.4071-4084, 2010.
9. **B. Demir**, S. Ertürk, M. K. Güllü "Hyperspectral image classification using denoising of intrinsic mode functions", *IEEE Geoscience and Remote Sensing Letters*, vol.8, no.2, pp. 220-224, 2011.
10. **B. Demir**, C. Persello, L. Bruzzone "Batch mode active learning methods for the interactive classification of remote sensing images", *IEEE Transactions on Geoscience and Remote Sensing*, vol.49, no.3, pp. 1014-1031, 2011.
11. **B. Demir**, F. Bovolo, L. Bruzzone "Detection of land-cover transitions in multitemporal remote sensing images with active learning based compound classification", *IEEE Transactions on Geoscience and Remote Sensing*, vol.50, no.5, pp. 1930-1941, 2012
12. **B. Demir**, F. Bovolo, L. Bruzzone "Classification of image time series with limited training data", *IEEE Transactions on Image Processing*, vol. 22, no. 8, pp.3219-3233, 2013.
13. **B. Demir**, F. Bovolo, L. Bruzzone "Updating land-cover maps by classification of image time series: a novel change-detection-driven transfer learning approach", *IEEE Transactions on Geoscience and Remote Sensing*, vol.51, no.1, pp. 300-312, 2013.
14. **B. Demir**, L. Minello, L. Bruzzone "An effective strategy to reduce the labeling cost in the definition of training sets with active learning", *IEEE Geoscience and Remote Sensing Letters*, vol. 11, no. 1, pp.79-83, 2014.

15. **B. Demir**, L. Minello, L. Bruzzone “Definition of effective training sets for supervised classification of remote sensing images by a novel cost-sensitive active learning method”, *IEEE Transactions on Geoscience and Remote Sensing*, vol. 52, no. 2, pp.1272-1284, 2014.
16. **B. Demir**, L. Bruzzone “A Multiple criteria active learning method for support vector regression”, *Pattern Recognition*, vol. 47, no. 7, pp. 2558–2567, 2014.
17. **B. Demir**, L. Bruzzone “A Novel active learning method in relevance feedback for content based remote sensing image retrieval”, *IEEE Transactions on Geoscience and Remote Sensing*, vol. 53, no.5, pp. 2323-2334, 2015.
18. **B. Demir**, L. Bruzzone “Hashing Based Scalable Remote Sensing Image Search and Retrieval in Large Archives”, *IEEE Transactions on Geoscience and Remote Sensing*, vol. 54, no.2, pp. 892-904, 2016.
19. **B. Demir**, L. Bruzzone “Histogram Based Attribute Profiles for Classification of Very High Resolution Remote Sensing Images”, *IEEE Transactions on Geoscience and Remote Sensing*, vol. 54, no.4, pp. 2096-2107, 2016
20. L. Pasolli, D. Castelletti, L. Bruzzone, C. Notarnicola, and **B. Demir**, “Estimation of Bio/Geo-physical Parameters from Remote Sensing Images by a Novel Hybrid Approach”, *IEEE Transactions on Geoscience and Remote Sensing*, in press.
21. B. Chaudhuri, **B. Demir**, L. Bruzzone, S. Chaudhuri, “Region-Based Retrieval of Remote Sensing Images using an Unsupervised Graph-Theoretic Approach”, *IEEE Geoscience and Remote Sensing Letters*, in press.

7.2. BOOK CHAPTERS

1. L. Bruzzone, C. Persello, **B. Demir**, Active Learning Methods in Classification of Remote Sensing Images, in *Signal and Image Processing for Remote Sensing*, 2nd Edition, Ed: Prof. C.H. Chen, CRC Press - Taylor & Francis, Chapter 15, 2012, pp. 303-323.
2. L. Bruzzone, **B. Demir**, A Review of Modern Approaches to Classification of Remote Sensing Data, in *Land Use and Land Cover Mapping Europe, Practices and Trends*, Eds: I. Manakos, M. Braun, EARSeL Book Series, Springer Verlag, Chapter 9, 2014, pp. 127-143.
3. L. Bruzzone, **B. Demir**, F. Bovolo, Recent Advances in Remote Sensing Time Series Image Classification, under review.

7.3. INTERNATIONAL CONFERENCES

1. **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,

November 2006.

2. **B. Demir**, S. Ertürk, “More sparsity in hyperspectral SVM classification using unsupervised pre-segmentation in the training phase”, 3rd International Conference on Recent Advances in Space Technologies, 14-16 June 2007, Istanbul, Turkey, June 2007.
3. **B. Demir**, S. Ertürk, “Hyperspectral data classification using RVM with pre-segmentation and RANSAC”, International Conference on Geosience and Remote Sensing Symposium, 23-27 July 2007, Barcelona, Spain, July 2007.
4. **B. Demir**, S. Ertürk, “Phase correlation based supervised classification of hyperspectral images using multiple class representatives”, International Conference on Geosience and Remote Sensing Symposium, 23-27 July 2007, Barcelona, Spain, July 2007.
5. 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, September 2008.
6. **B. Demir**, S. Ertürk, “Empirical mode decomposition pre-process for higher accuracy hyperspectral image classification”, International Conference on Geosience and Remote Sensing Symposium, Boston, Massachusetts, USA, July 2008.
7. **B. Demir**, S. Ertürk, “Reducing the computational load of hyperspectral band selection using the one-bit transform of hyperspectral bands”, International Conference on Geosience and Remote Sensing Symposium, Boston, Massachusetts, USA, July 2008.
8. **B. Demir**, S. Ertürk, “Spectral magnitude and spectral derivative feature fusion for improved classification of hyperspectral images”, International Conference on Geosience and Remote Sensing Symposium, Boston, Massachusetts, USA, July 2008.
9. **B. Demir**, S. Ertürk, “Improved hyperspectral image classification with noise reduction pre-process”, European Signal Processing Conference, Lausanne, Switzerland, August 2008.
10. **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.
11. **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, June 2009.
12. **B. Demir**, S. Ertürk, “An Empirical node 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.
13. **B. Demir**, S. Ertürk, “Accurate SVM classification using border training patterns”, First Workshop on Hyperspectral Image and Signal Processing: Evolution on Remote Sensing, Grenoble, France, August 2009.

14. **B. Demir**, S. Ertürk, O. Urhan, “Improved quality multiple description 3D mesh coding with optimal filtering”, IEEE International Conference on Image Processing, Cairo, Egypt, November 2009.
15. **B. Demir**, S. Ertürk, “Improving SVM classification accuracy using a hierarchical approach for hyperspectral images”, IEEE International Conference on Image Processing, Cairo, Egypt, November 2009.
16. **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.
17. **B. Demir**, F. Bovolo, L. Bruzzone, “A change-detection-driven approach to active transfer learning for classification of image time series”, SPIE Image and Signal Processing for Remote Sensing, Prague Czech Republic, September 2011.
18. **B. Demir**, F. Bovolo, L. Bruzzone, “Detection of land-cover transitions in multitemporal images with active-learning based compound classification”, International Conference on Geoscience and Remote Sensing Symposium, Vancouver, Canada, July 2011.
19. **B. Demir**, F. Bovolo, L. Bruzzone, “Active-learning based cascade classification of multitemporal images for updating land-cover maps”, 6th International Workshop on the Analysis of Multi-Temporal Remote Sensing Images, Trento, Italy, July 2011.
20. **B. Demir**, F. Bovolo, L. Bruzzone, “A novel system for classification of image time series with limited ground reference data”, International Conference on Geoscience and Remote Sensing Symposium, Munich, Germany, July 2012.
21. **B. Demir**, L. Minello, L. Bruzzone, “A cost-sensitive active learning technique for the definition of effective training sets for supervised classifiers”, International Conference on Geoscience and Remote Sensing Symposium, Munich, Germany, July 2012.
22. **B. Demir**, L. Minello, L. Bruzzone, “A genetic algorithm based cost-sensitive active learning technique for classification of remote sensing images”, Tyrrhenian Workshop on Advances in Radar and Remote Sensing, Napoli, Italy, September 2012.
23. **B. Demir**, L. Bruzzone, “A novel active learning method for support vector regression to estimate biophysical parameters from remotely sensed images”, SPIE Image and Signal Processing for Remote Sensing, Edinburgh, UK, September 2012.
24. **B. Demir**, F. Bovolo, L. Bruzzone, “Sequential cascade classification of image time series by exploiting multiple pairwise change detection”, International Conference on Geoscience and Remote Sensing Symposium, Melbourne, Australia, 2013.
25. **B. Demir**, L. Bruzzone, “An effective active learning method for interactive content-based retrieval in remote sensing images”, International Conference on Geoscience and Remote Sensing Symposium, Melbourne, Australia, 2013.
26. F. Bovolo, L. Bruzzone, **B. Demir**, “An approach to Content-Based Time Series Retrieval for detecting changes in large Remote Sensing data archives”, Image

Information Mining Conference: The Sentinels Era, Universitatea Politehnica Bucuresti (UPB), Bucharest, Romania, 05-07 March 2014.

27. L. Bruzzone, **B. Demir**, F. Bovolo, C. Brockmann, N. Fomferra, M. Iapaolo, R. Jha, J. Lu, R. Quast, K. Stelzer and L. Veci, "Analyzing and retrieving Remote Sensing images from large data archives", Image Information Mining Conference: The Sentinels Era, Universitatea Politehnica Bucuresti (UPB), Bucharest, Romania, 05-07 March 2014.
28. **B. Demir**, L. Bruzzone, "Kernel-based hashing for content-based retrieval in large remote sensing data archives", International Conference on Geoscience and Remote Sensing Symposium, Québec, Canada, July 2014.
29. D. Castelletti, **B. Demir**, L. Bruzzone, "A transductive support vector regression method to estimate biophysical parameters from remotely sensed images", SPIE Image and Signal Processing for Remote Sensing, Amsterdam, Netherlands, 22 - 25 September 2014.
30. B. Demir, L. Bruzzone, "Scalable content based image retrieval based on a hierarchical hashing approach", Conference on Big Data from Space, Rome, Italy, 2014.
31. E. Riz, **B. Demir**, L. Bruzzone, "Speeded up content based remote sensing image retrieval with additive kernel support vector machines ", Conference on Big Data from Space, Rome, Italy, 2014.
32. R. Battiti, **B. Demir**, L. Bruzzone, "Compressed histogram attribute profiles for the classification of vhr remote sensing images", SPIE Image and Signal Processing for Remote Sensing, France, 2015.
33. F. Bovolo, **B. Demir**, L. Bruzzone, "A cluster-based approach to content based time series retrieval", International Conference on Geoscience and Remote Sensing Symposium, Milan, Italy, 2015.
34. **B. Demir**, L. Bruzzone, "Histogram based attribute profiles for classification of very high resolution remote sensing images", International Conference on Geoscience and Remote Sensing Symposium, Milan, Italy, 2015.
35. **B. Demir**, L. Bruzzone, "Fast and accurate image classification with histogram based features and additive kernel SVM ", International Conference on Geoscience and Remote Sensing Symposium, Milan, Italy, 2015.
36. S. Paloscia, S. Pettinato, E. Santi, C. Notarnicola, F. Greifeneder, G. Cuozzo, I. Nicolini, **B. Demir**, L. Bruzzone, "An analysis of the capabilities of Cosmo-Skymed and Radarsat systems for agricultural area monitoring", International Conference on Geoscience and Remote Sensing Symposium, Milan, Italy, 2015
37. S. Niazmardi, **B. Demir**, L. Bruzzone, A. Safari and S. Homayouni " A Comparative Study On Multiple Kernel Learning for Remote Sensing Image Classification", International Conference on Geoscience and Remote Sensing Symposium, China, 2016.
38. R. Battiti, **B. Demir**, L. Bruzzone, "Quad-Tree Based Compressed Histogram Attribute Profiles for Classification of Very High Resolution Images", International Conference on Geoscience and Remote Sensing Symposium, China, 2016.
39. F. Omruuzun, **B. Demir**, L. Bruzzone, Y. Yardimci Cetin, "Content Based Hyperspectral Image Retrieval Using Bag Of Endmembers Image Descriptors", 8th Workshop on

7.4. NATIONAL CONFERENCES (IN TURKISH)

1. **B. Demir**, S. Ertürk, “Flexible multiple description 3-D model coding using wavelet subdivision surfaces”, IEEE Signal Processing and Communications Applications Conference, April 2006.
2. İ. Yıldırım, **B. Demir**, S. Ertürk, “3-Dimensional modeling and visualization of cultural assets for E-government”, IEEE Signal Processing and Communications Applications Conference, April 2006.
3. **B. Demir**, S. Ertürk, “Sparsity/accuracy trade-off for vector machine based hyperspectral classification”, IEEE 15th Signal Processing and Communications Applications Conference, June 2007.
4. 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, June 2007.
5. **B. Demir**, S. Ertürk, “Wavelet denoising before support vector classification of hyperspectral images”, IEEE 15th Signal Processing and Communications Applications Conference, June 2007.
6. Z. Kızıltoprak, **B. Demir**, B. Diri, “Increasing classification accuracy of relevance vector machine on hyperspectral images with preprocessing”, IEEE 16th Signal Processing and Communications Applications Conference, April 2008.
7. 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, April 2008.
8. **B. Demir**, S. Ertürk, “Hyperspectral image classification based on empirical mode decomposition”, IEEE 16th Signal Processing and Communications Applications Conference, April 2008.
9. **B. Demir**, S. Ertürk, “Hiperspektral görüntülemenin savunma teknolojileri uygulamaları ve spektral eğiltme sayesinde yüksek tanıma başarımı”, 4th National Defense Technologies Conference, June 2008.
10. **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, April 2009.
11. **B. Demir**, S. Ertürk, “Empirical mode decomposition based decision fusion for hyperspectral image classification”, IEEE 17th Signal Processing and Communications Applications Conference, April 2010.
12. **B. Demir**, F. Bovolo, L. Bruzzone, “Detection of land-cover transitions in multitemporal images with a joint entropy based active-learning method”, IEEE 19th

Signal Processing and Communications Applications Conference, April 2011.

13. **B. Demir**, F. Bovolo, L. Bruzzone, “Low-cost updating of land-cover maps by classifying multitemporal remote sensing images”, IEEE 20th Signal Processing and Communications Applications Conference, April 2012.
14. **B. Demir**, L. Bruzzone, “Biophysical parameters estimation from remotely sensed images by a multiple criteria active learning method”, IEEE 22th Signal Processing and Communications Applications Conference, April 2014.
15. **B. Demir**, L. Bruzzone, “A Novel Active Learning Method for Content Based Remote Sensing Image Retrieval”, IEEE 23rd Signal Processing and Communications Applications Conference, April 2015.
16. F.Omruezun, **B. Demir**, L. Bruzzone, Y. Yardimci Cetin, “A Novel Content Based Hyperspectral Image Retrieval System Based on Bag of End Members”, IEEE 24th Signal Processing and Communications Applications Conference, May 2016.

7.5. THESIS

1. **B. Demir**, “Hyperspectral Image Classification with High Accuracy”, Ph.D. dissertation, Advisor: Prof. Dr. Sarp Erturk, September 2010.
2. **B. Demir**, “Smart Hyperspectral Image Classification Methods”, Master degree, Advisor: Prof. Dr. Sarp Erturk, September 2007.
3. **B. Demir**, “Transferring Data Over the Network with Java Programming Language”, Bachelor degree, Advisor: Prof. Dr. Sarp Erturk, June 2005.