Gökhan BİLGİN

Yildiz Technical University Computer Engineering Dept.
Davutpasa Campus 34220 Esenler, Istanbul-Turkey
Mobile: +90 (5xx) -
Office: +90 (212) 383 57 78
Fax: +90 212 3835732
e-mail: gbilgin@yildiz.edu.tr
gokhanb@ce.yildiz.edu.tr
web: www.yildiz.edu.tr/~gbilgin
AVESIS: http://avesis.yildiz.edu.tr/gbilgin/

RESEARCH INTERESTS

Signal Processing
Image Processing
Machine Learning
Pattern Recognition
Data Mining
Biomedical Data Processing
Remote Sensing
Microcontrollers & DSPs
Hardware Applications
Mobile Applications

EDUCATION

Oct 2003 – June 2009 **Yildiz Technical University** **Istanbul**
Electronics and Communication Engineering Department PhD Program

Doctorate thesis is '*Unsupervised Segmentation of Hyperspectral Images'*.

Hyperspectral imaging is an emerging technology in remote sensing, which has the advantage of using hundreds of spectral bands (each band is an image). Hyperspectral imaging has found many applications in civil and military fields, such as remote sensing, geology, medicine, chemistry, environmental monitoring, agriculture, forestry, defense and security, target detection, urban planning and management.

In this thesis various problems are handled for efficient segmentation of a hyperspectral images using signal and image processing, pattern recognition and machine learning techniques and several articles were published. In the thesis, it is accomplished to find new solutions and novel approaches for various problems from the different stages of the hyperspectral image segmentation task; such as noise removal, dimension reduction, enhancement of clustering results by post-processing techniques and cluster validation for segmentation.

Thesis advisors are ***Prof. Dr. Tulay Yildirim*** in the Department of Electronics and Communication Engineering at YTU and ***Prof. Dr. Sarp Ertürk*** in the Department of Electronics and Communication Engineering at Kocaeli University.

Courses: Advanced Signal Processing, Neural Network Applications in Image Processing, Design of Artificial Neural Network Systems, Computational Bioinformatics, Digital Filters, Pattern Recognition, Machine Learning.

GPA: 3.57/4

Oct 2000 – Apr 2003 **Yildiz Technical University** **Istanbul**
Electronics and Communication Engineering Department MSc. Program

Thesis: *Image Compression with Wavelet Transform and Set Partitioning in Hierarchical Trees Method*: Worked on wavelet–based coding which provides substantial improvements in image quality at higher compression ratios.

Courses: Information Theory, Signal Processing Applications, Computer Communication and Network Protocols, Advanced Electromagnetics 1-2, Neural Networks, Probability in System Analysis, Numerical Analysis in Electromagnetics Theory.

GPA: 3.55 / 4

Oct 1995 – June 1999 **Yildiz Technical University** **Istanbul**
Electronics and Communication Engineering Department BSc.

Senior Project: *Designing Intelligent Cable Tester System (CTS) with 8051 Family Microcontroller*:

In this project maximum 40x40 connected cables are tested by CTSystem. There are 2 modes; learning and testing modes. In learning mode a new cable pattern can be learned by system also this pattern can be saved to system memory. In testing mode cable is tested according to patterns in memory. Results can be viewed by LCD, Printer (by printer interface) or RS232 Serial interface that can be connected to systems having RS232 port for instance computer serial port.

Sep 1991 – Jan 1995 Anatolian Teacher Training Highschool Duzce
Science-Maths Division

Highschool First Degree Honours GPA: 4.95/5. One year English preparation class.

PROFESSIONAL EXPERIENCE

Oct 2012 – Now Supervising the Private Companies Istanbul/Ankara
Supervisor on Machine Learning, Data Mining, Pattern Recognition, Image Processing

1) Aug 2012 – Dec 2013: DONE Communication & Information Systems/Done Labs
http://www.donetr.com/index.html
2) Mar 2014 – Cont.: MilSOFT Software Technologies Inc. (Military Projects)
http://www.milsoft.com.tr/

Oct 2017 – Cont. Yildiz Technical University Istanbul
Associate Prof. Dr in Computer Engineering Department
Courses Taught:

Undergraduate: Electronic Circuits; Logic Circuits, Assembly Language, Data Mining, Digital Signal Processing

Graduate: Biomedical Signal and Image Processing, Signal and Image Processing in Remote Sensing.

Oct 2010 – Oct 2017t Yildiz Technical University Istanbul
Assistant Prof. Dr in Computer Engineering Department
Courses Taught:

Undergraduate: Electronic Circuits; Logic Circuits, Assembly Language, Data Mining, Digital Signal Processing

Graduate: Biomedical Signal and Image Processing, Signal and Image Processing in Remote Sensing.

Sep 2010 – Sep 2011 Indiana University-Purdue University in Indianapolis
Postdoctoral Researcher in Computer and Information Sciences Department at IUPUI
Fundamental research in machine learning and its application to biomedical image analysis, biodetection, and remote sensing.

Dec 2005 – Oct 2010 Yildiz Technical University Istanbul
Research and Teaching Assistant in Computer Engineering Department

Teaching assistant in Digital Signal Processing, Data Mining and Assembly courses. Responsible from Logic, Electronic circuits, Microprocessors Laboratories.Advisor on student projects related with image, digital signal processing, data mining, intelligent systems and microcontrollers.

Feb 2005 – Dec 2005 Beko Electronics Company Istanbul
SW Engineer in Digital Products and Display Design Department

Developed software, hardware and test processes of new LCD TV set which is based on Philips concept.

Jan 2001 – July 2004 Yildiz Technical University Istanbul
Research Assistant in Computer Engineering Department

Responsible from Logic, Electronic circuits, Microprocessors Laboratories. Also Teaching Assistant in Digital Signal Processing. Advisor on student projects related with image, digital signal and image processing, network, intelligent systems and microcontrollers.

1999 Jun - 2001 Jan **Adam Electronics R&D Ltd.** **Istanbul**

R&D Department Engineer

Militarial Radar Integration Project: In this project information flow between headquarters was established via intranet structure with routers, switchs and modems and appropriate software solution. Designing with Intel 8051, Atmel AVR90s Risc and Motorola 6800 series microcontrollers (HW &SW) Designing test systems that work with serial and parellel port application (Cbuilder and VB). Network design and management of company.

PUBLICATIONS

JOURNALS

- A. Albayrak, **G. Bilgin**, "Automatic cell segmentation in histopathological images via two-staged superpixel-based algorithms," Medical & Biological Engineering & Computing, OX 2018, volume XX, issue XX, pp x–x (Published/available online: 16.10.2018).DOI: 10.1007/s11517-018-1906-0
- U. Ergul, **G. Bilgin**, "Multiple-instance ensemble learning for hyperspectral images," J. Appl. Remote Sens. 11(4), 045009, pp. 1-17 (Published/available online: 29.11.2017). DOI: 10.1117/1.JRS.11.045009
- N. Hatipoglu, **G. Bilgin**,"Cell segmentation in histopathological images with deep learning algorithms by utilizing spatial relationships," Medical & Biological Engineering & Computing (Published/available online: 28.02.2017).DOI: 10.1007/s11517-017-1630-1
- M. Said Aydemir, **G. Bilgin**, "Semi-supervised Hyperspectral Image Classification Using Small Sample Sizes," IEEE Geoscience and Remote Sensing Letters, vol.14, no.5, pp.621-625, May 2017. DOI: 10.1109/LGRS.2017.2665679
- U. Ergül, **G. Bilgin**, "Integration of spectral and spatial information via local covariance matrices for segmentation and classification of hyperspectral images," The Turkish Journal of Electrical Engineering & Computer Sciences, vol. 24, no. 6, pp. 4824-4838. (Published/available online: 17.09.2015). DOI: 10.3906/elk-1412-29
- S. Abdikan, **G. Bilgin**, F.B. Sanli, E. Uslu, M. Ustuner, "Enhancing land use classification with fusing dual-polarized TerraSAR-X and multispectral RapidEye data," Journal of Applied Remote Sensing, 9(1), 096054 (2015). DOI: 10.1117/1.JRS.9.096054
- H. Binol, **G. Bilgin**, S. Dinc and A. Bal, "Kernel Fukunaga–Koontz transform subspaces for classification of hyperspectral images with small sample sizes," IEEE Geoscience and Remote Sensing Letters, vol.12, no.6, pp.1287-1291, June 2015. DOI: 10.1109/LGRS.2015.2393438
- **Bilgin, G.,** Erturk, S., Yildirim, T., "Segmentation of Hyperspectral Images via Subtractive Clustering and Cluster Validation Using One-Class Support Vector Machines," IEEE Transactions on Geoscience and Remote Sensing, vol. 49, issue 8, pp. 2936-2944, Aug 2011. DOI: 10.1109/TGRS.2011.2113186
- M. M. Dundar, S. Badve, **G. Bilgin**, V. Raykar, R. Jain, O. Sertel, M. N. Gurcan, "Computerized Classification of Intraductal Breast Lesions using Histopathological Images," IEEE Transactions on Biomedical Engineering, vol. 58, No. 7, pp. 1977-1984, Jul 2011. DOI: 10.1109/TBME.2011.2110648
- **Bilgin, G.,** Erturk, S., Yildirim, T., "Unsupervised Classification of Hyperspectral-Image Data Using Fuzzy Approaches That Spatially Exploit Membership Relations," IEEE Geoscience and Remote Sensing Letters, vol. 5, issue 4, pp. 673-677, Oct 2008. DOI: 10.1109/LGRS.2008.2002319

NATIONAL JOURNALS

- Ceren Gülra Melek, G. Bilgin, "Serviks Kanserinin Erken Teşhisi için Çok Katmanlı Sitoloji Küplerinde Çekirdek ve Sitoplazma Bölütlenmesi," Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Süleyman Demirel University Journal of Natural and Applied Sciences , vol. 22, issue 2, 727-735, 2018, (Published/available online: 30.10.2017). DOI: 10.19113/sdufbed.34517
- Hamza Osman Ilhan, G. Bilgin, "Sleep Stage Classification via Ensemble and Conventional Machine Learning Methods using Single Channel EEG Signals," International Journal of Intelligent Systems and Applications in Engineering, vol. 5, no. 4, pp. 174-184 (Published/available online: 28/12/2017). DOI: 10.18201/ijisae.2017533859
- C. Avci and G. Bilgin, "Sleep Apnea Detection Using Adaptive Neuro Fuzzy Inference System," Engineering, Vol. 5 No. 10B, 2013, pp. 259-263. DOI: 10.4236/eng.2013.510B054."

CONFERENCES (National & International)

- Saadet Aytaç Arpacı, Gokhan Bilgin, "Lenfoma Histopatolojik Görüntülerinin Uzamsal Özellik Tanımlayıcıları Temelinde Evrişimsel Yapay Sinir Ağı ile Sınıflandırılması; Classification of Histopathological Images of Lymphoma by Convolutional Neural Network Based on Spatial Feature Descriptors", Elektrik, Elektronik ve Biyomedikal Mühendisliği Konferansı, ELECO'18, paper ID:54, pp. xx-xx, 29 Kasım-1 Aralık 2018 Bursa, Turkiye
- Abdulkadir Albayrak, Gokhan Bilgin, "Histopatolojik Görüntülerde Kodlayıcı-Çözücü Tabanlı Derin Öğrenme Algoritması ile Hücresel Yapıların Bölütlenmesi; Segmentation of Cellular Structures with Encoder-Decoder Based Deep Learning Algorithm in Histopathological Images", IEEE Tıp Teknolojileri Kongresi TipTekno'18 - IEEE Medical Technologies Congress, paper ID:87, pp. 1-5, 8-10 Kasım 2018, Gazi Magosa, KKTC.
- Ustuner, M., Sanli, F. B., Abdikan, S., Esetlili, M. T., and Bilgin, G., "An Applicatıon of Roll-Invariant Polarimetric Features for Crop Classıficatıon from Multi-Temporal Radarsat-2 SAR Data", Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLII-1, 451-456, https://doi.org/10.5194/isprs-archives-XLII-1-451-2018, 2018.
- Sigirci I. O., Bilgin G., "Hyperspectral Image Classification Using Reduced Extreme Learning Machine", International Conference on Computer Science and Engineering – Uluslararası Bilgisayar Bilimleri ve Muhendisligi Konferansı UBMK'18, pp.xx, xx, Saraybosna, Bosna Hersek, 20-23 Eylül 2018.
- Abdulkadir Albayrak, Gokhan Bilgin, "A Hybrid Method of Superpixel Segmentation Algorithm and Deep Learning Method in Histopathological Image Segmentation," IEEE International Conference on Innovations in Intelligent Systems and Applications, pp. 1-5, 3-5 Temmuz 2018, Thessaloniki, Yunanistan.
- Ugur Ergul, Gokhan Bilgin, "Hiperspektral Görüntülerin Çoklu Çekirdek Aşırı Öğrenme Makinesi ile Sınıflandırılması; Classification of Hyperspectral Images with Multiple Kernel Extreme Learning Machine," IEEE 26. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 26th Conf. on Signal Processing and Communications Applications, xx-xx, 2-5 Mayıs 2018, Çeşme-İzmir, Türkiye.
- Unsal Gokdag, Mustafa Ustuner, Gokhan Bilgin, Fusun Balik Sanli, "Uzamsal Öznitelikler Kullanılarak Çekirdek Tabanlı Aşırı Öğrenme Makineleri ile PolSAR Görüntüsü Sınıflandırılması; Kernel Extreme Learning Machines for PolSAR Image Classification using Spatial Features," IEEE 26. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 26th Conf. on Signal Processing and Communications Applications, xx-xx, 2-5 Mayıs 2018, Çeşme-İzmir, Türkiye.
- Mustafa Ustuner, Unsal Gokdag, Gokhan Bilgin, Fusun Balik Sanli, "Eğiticili Sınıflandırma Yöntemlerinin Dengeli ve Dengesiz SAR Veri Kümelerindeki Başarımlarının Karşılaştırılması; Comparing the Classification Performances of Supervised Classifiers with Balanced and Imbalanced SAR Data Sets," IEEE 26. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 26th Conf. on Signal Processing and Communications Applications, xx-xx, 2-5 Mayıs 2018, Çeşme-İzmir, Türkiye.
- Koray Gunduz, Abdulkadir Albayrak, Gokhan Bilgin, M. Elif Karsligil, "Histopatolojik Görüntülerde Tümörlü Bölgelerin Evrişimsel Sinir Ağlarıyla Sınıflandırılması; Classification of Tumor Regions in Histopathological Images Using Convolutional Neural Networks," IEEE 26. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 26th Conf. on Signal Processing and Communications Applications, xx-xx, 2-5 Mayıs 2018, Çeşme-İzmir, Türkiye.
- Kadir Guzel, Gokhan Bilgin, "Hiperspektral Görüntülerin Sınıflanması için Dokusal Özellik Çıkarımı ve Aşırı Öğrenme Makinelerinin Topluluğu; Textural Feature Extraction and Ensemble of Extreme Learning Machines for Hyperspectral Image Classification," IEEE 26. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 26th Conf. on Signal Processing and Communications Applications, xx-xx, 2-5 Mayıs 2018, Çeşme-İzmir, Türkiye.
- Ugur Ergul, Gokhan Bilgin, "Hiperspektral Görüntülerin Melez Çekirdek Aşırı Öğrenme Makinesi ile Sınıflanması; Hyperspectral Image Classification with Hybrid Kernel Extreme Learning Machine" IEEE 25. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 25th Conf. on Signal Processing and Communications Applications, xx-xx, 15-18 Mayıs 2017, Antalya, Türkiye.
- Abdulkadir Albayrak, Gokhan Bilgin, "Yüksek Çözünürlüklü Histopatolojik Görüntülerinin Bölütlenmesinde Süperpiksel Yaklaşımı; Superpixel Approach in High Resolution Histopathological Image Segmentation" IEEE 25. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 25th Conf. on Signal Processing and Communications Applications, xx-xx, 15-18 Mayıs 2017, Antalya, Türkiye.
- Huseyin Cukur, Gokhan Bilgin, "Multispektral Histopatolojik Görüntülerde Mitozlu Hücre Tespiti; Detection of Mitotic Cells in Multispectral Histopathological Images" IEEE 25. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 25th Conf. on Signal Processing and Communications Applications, xx-xx, 15-18 Mayıs 2017, Antalya, Türkiye.
- Ibrahim Onur Sigirci, Gokhan Bilgin, "Bulanık C-Ortalamalar Tabanlı Kompozit Kernel Yaklaşımı Kullanılarak Hiperspektral Görüntülerin Sınıflandırılması; Hyperspectral Image Classification Using Fuzzy C-Means Based Composite Kernel Approach" IEEE 25. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 25th

Conf. on Signal Processing and Communications Applications, xx-xx, 15-18 Mayıs 2017, Antalya, Türkiye.

- M. Said Aydemir, Gokhan Bilgin, "Küçük Örnek Sayılı Hiperspektral Görüntülerde GPU ile Çizge Tabanlı Yarı-güdümlü Öğrenme; Graph-based Semi-supervised Learning with GPU on Small Sample Sized Hyperspectral Images" IEEE 25. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 25th Conf. on Signal Processing and Communications Applications, xx-xx, 15-18 Mayıs 2017, Antalya, Türkiye.
- Abdulkadir Albayrak, Aslı Unlu Akhan, Nurullah Calık, Gokhan Bilgin, Ilknur Türkmen, Aslı Cakır, Abdulkerim Capar, Behcet Ugur Toreyin, Lutfiye Durak Ata, "Rahim Ağzı (Serviks) Kanserinde Öncü Lezyonların Evrişimsel Sinir Ağlarıyla Bölütlenmesi;Segmentation of Precursor Lesions in Cervical Cancer Using Convolutional Neural Networks" IEEE 25. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 25th Conf. on Signal Processing and Communications Applications, xx-xx, 15-18 Mayıs 2017, Antalya, Türkiye.
- Mustafa Ustüner, Gokhan Bilgin, Saygin Abdikan, Fusun Balık Sanli, "Sentinel-1A SAR Görüntüsü ile Arazi Örtüsü ve Kullanımı Sınıflandırması: İstanbul Örneği; Land Use and Cover Classification of Sentinel-1A SAR Imagery: A Case Study of Istanbul" IEEE 25. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 25th Conf. on Signal Processing and Communications Applications, xx-xx, 15-18 Mayıs 2017, Antalya, Türkiye.
- Saygin Abdikan, Mustafa Ustuner, Fusun Balık Sanli, Gokhan Bilgin, "Landsat ve ALOS Verilerini Kullanarak Arazi Örtüsü Haritasının Oluşturulması; Combining Landsat and ALOS Data for Land Cover Mapping" IEEE 25. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 25th Conf. on Signal Processing and Communications Applications, xx-xx, 15-18 Mayıs 2017, Antalya, Türkiye.
- Beyazit Bestami Yuksel, Pasa Yazici, Gokhan Bilgin, "Gerçek Zamanlı EKG İşaretlerinin Mobil Sistemde İzlenmesi; Monitoring Real-Time ECG Signals in the Mobile System", 2. Ulusal Biyomedikal Cihaz Tasarımı ve Üretimi Sempozyumu - The 2nd National Biomedical Device Design and Production Symposium, 61-64, 16 Mayıs 2017, Istanbul, Türkiye.
- Abdulkadir Albayrak, Gokhan Bilgin, "Büyük Boyutlu Medikal Görüntülerin Evrişimsel Sinir Ağlarıyla Sınıflandırılması; Classification of Large-Scale Medical Images with Convolutional Neural Networks" 5.Ulusal Yüksek Başarımlı Hesaplama Konferansı – 5th National High Performance Computing Conference, 14-15 Eylül 2017, Yıldız Teknik Üniversitesi, Davutpaşa, İstanbul.
- Mustafa Ustüner, Gokhan Bilgin, Saygin Abdikan, Fusun Balık Sanli, Classification of Sentinel-1A SAR Data Using Principal Component Analysis and Kernel Principal Component Analysis, International Symposium on GIS Applications in Geography and Geosciences (ISGGG'17), Canakkale, 18-21 October 2017.
- Mustafa Erseven, Gokhan Bilgin, "Histopatolojik Görüntülerde Hücre Sınıflandırılması için İstatistiksel-Uzamsal Yaklaşım; Statistical-Spatial Approach for Cell Classification in Histopathological Imagery" 21. Biyomedikal Mühendisliği Ulusal Toplantısı, BIYOMUT'17 - 21st National Biomedical Engineering Conference, paper ID: 4, 24-26 Kasım 2017, Acıbadem, İstanbul.
- Onur Can Koyun, Gokhan Bilgin, "Derin Ögrenme ve Sezgisel Optimizasyon ile Histopatolojik Görünülerde Çekirdek Merkezlerinin Bulunması; Nuclei Detection in Histopathological Images with Deep Learning and Heuristic Optimization," 21. Biyomedikal Mühendisliği Ulusal Toplantısı, BIYOMUT'17 – 21st National Biomedical Engineering Conference, paper ID: 14, 24-26 Kasım 2017, Acıbadem, İstanbul.
- Muhammed Emin Bagdiken, Gokhan Bilgin, "Histopatolojik Görüntülerde Gabor Filtresi Tabanlı Özniteliklerle Hücre Tespiti; Cell Detection with Gabor Filter-Based Features in Histopathologic Images," 21. Biyomedikal Mühendisliği Ulusal Toplantısı, BIYOMUT'17 – 21st National Biomedical Engineering Conference, paper ID: 20, 24-26 Kasım 2017, Acıbadem, İstanbul.
- Mohanad Abd Shehab, Nihan Kahraman, Gokhan Bilgin, "Graph Extreme Learning Machine with L_21-norm Regularization for Face Recognition," 10th International Conference on Electrical and Electronics Engineering ELECO'17, paper ID:140, pp. 881-884, November 30-December 2, 2017, Bursa, Turkiye.
- Abdulkadir Albayrak, Gokhan Bilgin, "Mitosis Detection Using Convolutional Neural Network Based Features," IEEE 17th International Symposium on Computational Intelligence and Informatics (CINTI'16), pp. 335-339, 17-19 November, Budapest, Hungary.
- Unsal Gokdag, Gokhan Bilgin, "Local Averaging Based Feature Extraction on Hyperspectral Image Data," IEEE 17th International Symposium on Computational Intelligence and Informatics (CINTI'16), pp. 157-161, 17-19 November, Budapest, Hungary.
- Ceren Gulra Melek, Gokhan Bilgin, "Serviks Kanserinin Erken Teşhisi İçin Çok Katmanlı Sitoloji Küplerinde Çekirdek ve Sitoplazma Bölütlenmesi; Nucleus and Cytoplasm Segmentation in Multilayered Cytology Cubes for Early Detection of Cervical Cancer," 20. Biyomedikal Mühendisliği Ulusal Toplantısı – The 20th National Conference on Biomedical Engineering, pp. 105-109, 3-5 Kasım 2016, Seferihisar-Izmir, Türkiye.
- Ugur Ergul, Gokhan Bilgin, "Hiperspektral Görüntülerin Çoklu Örnek Torbalama Tabanlı Topluluk Sınıflanması; Multiple Instance Bagging Based Ensemble Classification of Hyperspectral Images" IEEE 24. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 24th Conf. on Signal Processing and Communications

Applications, 16-19 Mayıs 2016, Zonguldak, Türkiye.

- Nuh Hatipoglu, Gokhan Bilgin, "Histopatolojik Görüntüler İçin Evrişim Yapay Sinir Ağı Kullanılarak Öznitelik Çıkarımı; Feature Extraction for Histopathological Images Using Convolutional Neural Network" IEEE 24. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 24th Conf. on Signal Processing and Communications Applications, 16-19 Mayıs 2016, Zonguldak, Türkiye.
- M. Said Aydemir, Gokhan Bilgin, "Küçük Örnek Sayısına Sahip Hiperspektral Görüntülerde Yarı-güdümlü Sınıflandırma; Semi-supervised Classification of Hyperspectral Images with Small Sample Sizes" IEEE 24. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 24th Conf. on Signal Processing and Communications Applications, 16-19 Mayıs 2016, Zonguldak, Türkiye.
- I. Onur Sigirci, Gokhan Bilgin, "Bulanık C-Ortalamalar ve Dirichlet Karışım Modelleriyle Uzamsal Özelliklerin Çıkarılarak Hiperspektral Görüntülerin Sınıflandırılması; Hyperspectral Image Classification Using Spatial Features Extracted by Fuzzy C-Means and Dirichlet Mixture Model; Multiple Instance Bagging Based Ensemble Classification of Hyperspectral Images" IEEE 24. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 24th Conf. on Signal Processing and Communications Applications, 16-19 Mayıs 2016, Zonguldak, Türkiye.
- Abdulkadir Albayrak, Gokhan Bilgin, "Histopatolojik Görüntülerde Renk Uzaylarının Hücre Bölütlenmesine Etkileri; Effects of Color Spaces to the Cell Segmentation in Histopathological Images" IEEE 24. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 24th Conf. on Signal Processing and Communications Applications, 16-19 Mayıs 2016, Zonguldak, Türkiye.
- Ahmet Saygili, Gunalp Uysal, **Gokhan Bilgin**, "Comparative Analysis of Codeword Representation by Clustering Methods for the Classification of Histological Tissue Types," in Proc. of The 8th International Conference on Machine Vision, ICMV'15, SPIE-XX, Barcelona, Spain (2015).
- Ugur Ergul, **Gokhan Bilgin**, "Hiperspektral Görüntülerde Topluluk Öğrenme Yöntemleri İçin Çoklu Örnek Torbalama Yaklaşımı; Multiple Instance Bagging Approach for Ensemble Learning Methods on Hyperspectral Images" IEEE 23. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 23rd Conf. on Signal Processing and Communications Applications, CD paper id:162, pp. 403-406, 16-19 Mayıs 2015, Malatya, Türkiye.
- Nuh Hatipoglu, **Gokhan Bilgin**, "Histopatolojik Görüntülerde Fourier Özellikleri Kullanılarak Evrişim Yapay Sinir Ağı ile Bölütleme; Segmentation of Histopathological Images with Convolutional Neural Networks using Fourier Features" IEEE 23. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 23rd Conf. on Signal Processing and Communications Applications, CD paper id:178, pp. 455-458, 16-19 Mayıs 2015, Malatya, Türkiye.
- Mustafa Ustuner, **Gokhan Bilgin**, "İstatistiksel Tespit Algoritmaları ile Histopatolojik Görüntülerde Mitoz Belirleme; Mitosis Detection on Histopathological Images using Statistical Detection Algorithms" IEEE 23. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 23rd Conf. on Signal Processing and Communications Applications, CD paper id:204, pp. 540-543 , 16-19 Mayıs 2015, Malatya, Türkiye.
- M. Said Aydemir, **Gokhan Bilgin**, "Hiperspektral Görüntülerde Sınıflandırma Amacıyla Seyrek ve Yarı-Güdümlü Öğrenmenin Birleştirilmesi; Combination of Sparse and Semi-Supervised Learning for Classification of Hyperspectral Images" IEEE 23. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 23rd Conf. on Signal Processing and Communications Applications, CD paper id:218, pp. 592-595, 16-19 Mayıs 2015, Malatya, Türkiye.
- Ibrahim Onur Sigirci, Abdulkadir Albayrak, **Gokhan Bilgin**, "Histopatolojik Görüntülerde Mitozlu Hücrelerin Tamamlanmış Yerel Ikili Örüntüler Kullanılarak Belirlenmesi; Detection of Mitotic Cells Using Completed Local Binary Pattern in Histopathological Images" IEEE 23. Sinyal İşleme ve Uygulamaları Kurultayı - IEEE 23rd Conf. on Signal Processing and Communications Applications, CD paper id:360, pp. 1078-1081, 16-19 Mayıs 2015, Malatya, Türkiye.
- Cevahir Parlak, **Gökhan Bilgin**, "Hiperspektral Görüntü Sıkıştırma Yöntemlerinin Karşılaştırılması-Compression Of Hyperspectral Images: A Comparative Study," IEEE 22. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:49, pp. 200-203, 23-25 Nisan 2014, Trabzon, Türkiye.
- Ömer Faruk Karaaslan, **Gökhan Bilgin**, "Dalgacık Dönüşümüyle Gürültüsü Giderilmiş Görgül Kip Ayrışımı ile EKG Sınıflandırma-ECG Classification with Emprical Mode Decomposition Denoised by Wavelet Transform," IEEE 22. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:213, pp. 694-697, 23-25 Nisan 2014, Trabzon, Türkiye.
- Tolga Bakırman, **Gökhan Bilgin**, Füsun Balık Şanlı, Erkan Uslu, Mustafa Üstüner, "Sentetik Açıklık Radar ve Multispektral Uydu Verilerinin Kaynaştırılması ve Sınıflandırılması-Fusion and Classification of Synthetic Aparture Radar and Multispectral Sattellite Data," IEEE 22. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:232, pp. 754-757, 23-25 Nisan 2014, Trabzon, Türkiye.
- İbrahim Onur Sığırcı, **Gökhan Bilgin**, "Dirichlet Karışım Modelleriyle Hiperspektral Görüntülerin Bölütlenmesi-Hyperspectral Image Segmentation Using The Dirichlet Mixture Models," IEEE 22. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:306, pp. 983-986, 23-25 Nisan 2014, Trabzon, Türkiye.

- Merve Gençer, **Gökhan Bilgin**, Özgür Zan, and Tansel Voyvodaoğlu, "Detection of Churned and Retained Users with Machine Learning Methods for Mobile Applications", A. Marcus (Ed.): DUXU 2014, Part II, LNCS 8518, pp. 234–245, 2014.
- Nuh Hatipoglu, **Gokhan Bilgin**, "Classification of Histopathological Images Using Convolutional Neural Network", 4th International Conference on Image Processing Theory, Tools and Applications, IPTA'14, paper ID: 497, Paris, France, October 14-17, 2014
- Ceyda Nur Ozturk, **Gokhan Bilgin**, "A comparative study on manifold learning of hyperspectral data for land cover classification," in Proc. SPIE 9443, The Sixth International Conference on Graphic and Image Processing (ICGIP 2014), 94431L (Oct 24-26, 2014) Beijing, China, doi:10.1117/12.2178817.
- M. Gencer, **G. Bilgin** and N. Aydin, "Embolic Doppler Ultrasound Signal Detection via Fractional Fourier Transform", in 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'13), pp. 3050-3053, Osaka, Japan, 3-7 July, 2013.
- Merve Gençer, **Gökhan Bilgin**, Özgür Zan, and Tansel Voyvodaoğlu, "A New Framework for Increasing User Engagement in Mobile Applications Using Machine Learning Techniques", in A. Marcus (Ed.): DUXU/HCII 2013, Part IV, LNCS 8015, pp. 651--659. Springer, Heidelberg (2013).
- M. Said Aydemir and **G. Bilgin**, "2D2PCA-based Hyperspectral Image Classification With Utilization of Spatial Information" in Workshop on Hyperspectral Image and Signal Processing - Evolution in Remote Sensing (WHISPERS'13), Florida, USA, 25-28 June 2013.
- U. Ergul and **G. Bilgin**, "Multiscale Local Covariance Based Feature Extraction for Segmantation of Hyperspectral Images" in Workshop on Hyperspectral Image and Signal Processing - Evolution in Remote Sensing (WHISPERS'13), Florida, USA, 25-28 June 2013.
- C. Avci and **G. Bilgin**, "Sleep Apnea Detection Using Adaptive Neuro Fuzzy Inference System," Engineering, Vol. 5 No. 10B, 2013, pp. 259-263. doi: 10.4236/eng.2013.510B054."
- Abdulkadir Albayrak, **Gokhan Bilgin**, "Breast cancer mitosis detection in histopathological images with spatial feature extraction", in Sixth International Conference on Machine Vision (ICMV 2013), Antanas Verikas; Branislav Vuksanovic; Jianhong Zhou, Editors, Proceedings of SPIE Vol. 9067 (SPIE, Bellingham, WA 2013), 90670L.
- **Gökhan Bilgin**, "Histopatolojik Görüntülerin Bölütlenmesinde Uzamsal Iliskilerin Degerlendirilmesi", IEEE 21. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:126 , 24-26 Nisan 2013, Girne, Kıbrıs.
- Uğur Ergül, **Gökhan Bilgin**, "Hiperspektral Görüntülerin Özuzayda Yerel Ortak-Degisinti Matrisleri Kullanilarak Bölütlenmesi", IEEE 21. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:49 , 24-26 Nisan 2013, Girne, Kıbrıs.
- Abdülkadir Albayrak, **Gökhan Bilgin**, "Histopatolojik Görüntülerde Mitozlu Hücrelerin Dokusal Öznitelikler Kullanilarak Belirlenmesi", IEEE 21. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:141 , 24-26 Nisan 2013, Girne, Kıbrıs.
- Erkan Uslu, Gökhan Bilgin, "Yerel Kesirli Fourier Dönüsümü ile Aritmi Siniflandirilmasi", IEEE 21. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:137 , 24-26 Nisan 2013, Girne, Kıbrıs.
- **Gökhan Bilgin**, Erkan Uslu, "Hiperspektral Görüntülerin Yerel Ortak-değişinti Matrisleri Kullanılarak Bölütlenmesi", IEEE 20. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:52 , 18-20 Nisan 2012, Fethiye, Muğla, Türkiye.
- Uslu E., **Bilgin G.,** "Exploiting Locality Based Fourier Transform for ECG Signal Diagnosis", Proc.of 17th International Conference on Applied Electronics, pp.323-326, Pilsen, Czech Republic, 5-7 September, 2012.
- **Gökhan Bilgin**, Sarp Ertürk, Tülay Yıldırım, "Hiperspektral Görüntülerin Bölütlenmesinde Bir-Sınıf Destek Vektör Makinesi Tabanlı Kümeleme Geçerliliği", IEEE 17. Sinyal İşleme ve Uygulamaları Kurultayı, CD paper id:42 , 9-11 Nisan 2009, Manavgat-Antalya, Türkiye.
- **Gökhan Bilgin**, Sarp Ertürk, Tülay Yıldırım, "Multiscale Windowed Denoising and Segmentation of Hyperspectral Images," IEEE Int'l Conf. on Computational Intelligence for Measurement Systems and Applications, Istanbul-Turkey, pp. 33-37,14–16 July, 2008.
- **Gökhan Bilgin**, Sarp Ertürk, Tülay Yıldırım, "Segmentation of Hyperspectral Images using Fuzzy Approaches", IEEE 16th Signal Processing and Communications Applications Conference, Aydın-Turkey, 20-22 April 2008.
- **Gökhan Bilgin**, Sarp Ertürk, Tülay Yıldırım, "Nonlinear Dimension Reduction Methods and Segmentation of Hyperspectral Images, IEEE 16th Signal Processing and Communications Applications Conference, Aydın-Turkey20-22 April 2008.

- **Gökhan Bilgin**, Sarp Ertürk, Tülay Yıldırım, "One-Class Support Vector Machines Based Cluster Validity in the Segmentation of Hyperspectral Images", IEEE 17th Signal Processing and Communications Applications Conference, Antalya-Turkey, 8-12 April 2009.
- Erkan Uslu, **Gökhan Bilgin**, "Classification of Heart Arrthymias by Using Wavelet and Merged Wavelet Packet Transforms", IEEE 16th Signal Processing and Communications Applications Conference, Aydın-Turkey, 20-22 April 2008.
- **Bilgin Gokhan**, Bolat Bülent, Yıldırım Tulay, "Effects of Data Reduction Methods on the Performance of Statistical Neural Networks in Medical Applications", pp. 136-139, International Conference Electrical and Electronics Engineering, ELECO 2007, Bursa, Turkey, 5-9 Dec 2006.
- **Bilgin Gokhan**, Bolat Bulent, "Breast Cancer Diagnosis by Using Active Learning PNN," INISTA (International Symposium on Innovations in Intelligent Systems and Applications), Istanbul, Turkey, 20-23 June 2007.
- **Bilgin Gokhan**, Dinç Tarkan, "A New Feature Extraction Technique: Subspace Angular Transform (SAT) for Pattern Recognition," INISTA (International Symposium on Innovations in Intelligent Systems and Applications), Istanbul, Turkey, 20-23 June 2007.
- Yavuz Sırma, Amasyalı M. Fatih, Balcılar Muhammet, **Bilgin Gökhan**, Dinç Tarkan, Kurt Zeyneb, "An Autonomous Robot for Simultaneous Localization and Map Building", International Conference Electrical and Electronics Engineering, ELECO 2006, Bursa, Turkey, pp. 225-229, 6-10 Dec. 2006.
- **Bilgin G.**, Altun, O., "Cardiac Problem Diagnosis Using SPECT Images with Statistical Neural Networks", Proc. of 10th IASTED International Conference Artificial Intelligence and Soft Computing, pp.109-112, Palma de Mallorca-Spain, 28-30 August 2006.
- **Bilgin Gökhan**, Bolat Bülent, "Classification of Waveveforms by Using Active Learning Statistical Neural Networks", National Automatical Control Conference, Ankara-Turkey, pp. 118-121, 06-08 Nov. 2006.
- **Bilgin G.**, Altun, O., "Cardiac Problem Diagnosis with Statistical Neural Networks and Performance Evaluation by ROC Analysis", Proc. of 12nd International Applied Electronics Conference, pp.15-18, Pilsen, Czech Republic, 6-7 September, 2006.
- **Bilgin G.**, Yıldırım, T., "Waveform Classification with Statistical Neural Networks", Proc. of 11st International Applied Electronics Conference, pp.45-47, Pilsen, Czech Republic, 7-8 September, 2005.
- **Gökhan Bilgin**, Ünal Küçük, "Image compression with wavelet transforms and set partitioning in hierarchical trees method", IEEE 12th Signal Processing and Communications Applications Conference, Kusadasi-Turkey pp. 324-326, 28-30 April 2004.

SKILLS

Computer Lanaguages: Assembly, Pascal, C, C++, Java, Python
Operating Systems: Linux, Microsoft Family
Application softwares:, Matlab (Advanced), MS Office, Latex

PERSONAL INFORMATION

Nationality: Turkish
D.O.B: 1977 Düzce/Turkey
Marital Status: Married
Military Profession: Completed (Jan 2005)
Languages: English (Advanced Level)- TOEFL score: 260 CBT (2005), KPDS: 92,5 ÜDS: 95
German (Mittel Stufe)

REFERENCES

Available upon request