

## Prof. Songül VARLI

### Personal Information

**Office Phone:** [+90 212 383 5781](tel:+902123835781)

**Fax Phone:** [+90 212 383 5732](tel:+902123835732)

**Web:** <http://www.vision.yildiz.edu.tr/>

**Address:** Yıldız Teknik Üniversitesi Davutpaşa Kampüsü Elektrik-Elektronik Fakültesi Bilgisayar Müh. Bölümü D Blok Kat 2  
No:221 Esenler-İstanbul

### International Researcher IDs

ScholarID: DaCI6\_YAAAAJ

ORCID: 0000-0002-1786-6869

Publons / Web Of Science ResearcherID: AAZ-4672-2020

ScopusID: 16309030500

Yoksis Researcher ID: 32083

### Education Information

Doctorate, Yıldız Technical University, Faculty Of Electrical & Electronics, Bilgisayar Mühendisliği Bölümü, Turkey 1993 - 2001

Postgraduate, Yıldız Technical University, Faculty Of Electrical & Electronics, Bilgisayar Mühendisliği Bölümü, Turkey 1989 - 1993

Undergraduate, Yıldız Technical University, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, Turkey 1985 - 1989

### Foreign Languages

English, B2 Upper Intermediate

### Certificates, Courses and Trainings

IT, Ziyaretçi Araştırmacı, Brunel University, Collage of Engineering Design and Physics, 2012

### Dissertations

Doctorate, Renk Özelliği ile İçerik Tabanlı Görüntü Erişimi, Yıldız Teknik Üniversitesi, Fen Bilimleri, Bilgisayar Mühendisliği Bölümü, 2001

Postgraduate, Sayısal İşaret ve Görüntü İşlemede B-Spline fonksiyonları ile İnterpolasyon ve Filtreleme, Yıldız Teknik Üniversitesi, Fen Bilimleri, Bilgisayar Mühendisliği Bölümü, 1993

### Research Areas

Computer Vision, Artificial Intelligence, Computer Learning and Pattern Recognition, Knowledge Engineering, Human Computer Interaction, Pattern Recognition and Image Processing, Biomedical Image Processing

## Academic Titles / Tasks

Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Computer Engineering, 2020 - Continues  
Associate Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Computer Engineering, 2014 - 2020  
Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Computer Engineering, 2003 - 2014  
Research Assistant, Yildiz Technical University, Faculty Of Electrical & Electronics, Computer Engineering, 1990 - 2003

## Academic and Administrative Experience

Head of Department, Yildiz Technical University, Faculty Of Electrical & Electronics, Computer Engineering, 2017 - 2021  
Assistant Director of the Institute, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, 2018 - 2020  
Head of Department, Yildiz Technical University, Faculty of Electrical & Electronics, Computer Engineering, 2005 - 2012  
Deputy Head of Department, Yildiz Technical University, Faculty of Electrical & Electronics, Computer Engineering, 2006 - 2008

## Courses

Data Mining and Knowledge Discovery, Postgraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016  
Veri Madenciliği, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015  
Computer Hardware, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015  
Computer Vision, Postgraduate, 2018 - 2019, 2016 - 2017, 2015 - 2016  
Microprocessor Systems, Undergraduate, 2018 - 2019, 2015 - 2016

## Advising Theses

Varlı S., Retinal Fundus Görüntülerinde Sınıflandırma ve Bölütleme, Postgraduate, S.AYTAÇ(Student), 2019  
Varlı S., Telekomünikasyon Sektöründe Müşteri Sadakati, Postgraduate, M.Yıldız(Student), 2017  
VARLI S., Predicting Venues in Location Based Social Network, Postgraduate, O.Almallah(Student), 2017  
Varlı S., Product recognition and counting in retail stores using computer vision, Postgraduate, M.H.(Student), 2017  
Varlı S., Grammatical genetic programming on heterogeneous computing platforms, Doctorate, H.AYRAL(Student), 2017  
Varlı S., MR görüntülerinde menisküslerin segmentasyonu ve menisküs yırtıklarının tespiti, Doctorate, A.SAYGILI(Student), 2017  
VARLI S., Konum Tabanlı Sosyal Ağlarda Konum Tahmini, Postgraduate, M.Baydar(Student), 2016  
Varlı S., 3-D automatic segmentation and modelling of cartilage compartments in high-field magnetic resonance images of the knee joint, Doctorate, C.NUR(Student), 2016  
Varlı S., İşaretçi iskelet yapısını kullanarak saklı Markov model ile türk işaret dili tanıma sistemi, Postgraduate, K.KAKAYEV(Student), 2016  
Varlı S., Omuz manyetik rezonans görüntülerinden Humerus bölütlenmesi ve Hill-Sachs lezyonlarının tespiti, Doctorate, A.SEZER(Student), 2015  
Varlı S., Lokasyon bazlı sosyal ağlarda insan hareketliliğinin modellenmesi, Postgraduate, N.NASİROV(Student), 2015  
VARLI S., Zamana Bağlı İşbirlikçi Filtreleme, Postgraduate, Ç.Bakır(Student), 2014  
VARLI S., Veri Madenciliğindeki Sınıf Dengesizliği Probleminin Giderilmesi, Postgraduate, A.Sarmanova(Student), 2013  
VARLI S., Kinect RGB Görüntülerde ve Derinlik Haritalarında Uzam-zamansal Özellikleri Kullanarak Türk İşaret Dili Tanıma, Postgraduate, A.Memiş(Student), 2013  
VARLI S., Sentetik Açıklık Radar Görüntülerinin Sınıflandırılması ve Kümelenme, Doctorate, E.Uslu(Student), 2013  
VARLI S., Veri Madenciliği Yöntemlerini Kullanarak Mühendislik Fakültesi Öğrencilerinin Demografik Bilgileri, ÖSYS Puanı ve Okul Başarısının Analizi, Postgraduate, A.Saygılı(Student), 2013

VARLI S., Gerçek Zamanlı Dolaylı Işıklandırma, Postgraduate, M.Arıca(Student), 2011  
Varlı S., Robust classification based on sparsity, Doctorate, E.BATTİNİ(Student), 2011  
Varlı S., Özdüzenleyici haritaların görselleştirilmesi, Postgraduate, E.ÖNCEL(Student), 2011  
VARLI S., FPGA Tabanlı Sentezlenebilir İşlemci Tasarımı, Postgraduate, S.Başak(Student), 2011  
VARLI S., Havayolu Şirketlerinde Müşteri İlişkileri Yönetimini (CRM) Desteklemek Ve Müşteri Sadakatini Değerlendirmek İçin Veri Madenciliğinin Kullanılması, Postgraduate, A.Hasan(Student), 2011  
Varlı S., Web kullanım madenciliğinde birliktelik kurallarının uygulanması, Postgraduate, H.MUKADDER(Student), 2010  
Varlı S., İlgili bölgeleri ve yerel tanımlayıcılar ile genelleştirilmiş Hough dönüşümü ve en az eylemsizlik eksenli tabanlı hizalama yaklaşımı ile Türk işaret dili tanıma sistemi, Doctorate, O.ALTUN(Student), 2010  
VARLI S., Aykırı Değer Tespitinde Yoğunluk Tabanlı Kümeleme Yöntemleri, Postgraduate, M.Tekbir(Student), 2009  
VARLI S., Gen Kümeleme İşleminin Özdüzenleyici Haritalar Kullanılarak Gen Ekspresyonu, Motif Sıklık ve Gen Konum Verilerinden Faydalanılarak Gerçekleştirimi, Postgraduate, A.Özdoğan(Student), 2009  
VARLI S., Veri Madenciliğinde Market Sepet Analizi ve Birliktelik Kurallarının Belirlenmesi, Postgraduate, A.Döşlü(Student), 2008  
VARLI S., Aktif Görünüm Modeli Kullanarak Yüz Tanıma, Postgraduate, Ç.Tırkaz(Student), 2008  
Varlı S., 2-boyutlu hareket kestirimi ve video çerçeve aradeğerlemesinde uygulanması, Postgraduate, S.NASIR(Student), 2007  
VARLI S., Vektör Kuantalama ile Görüntü Sıkıştırma, Postgraduate, N.Erdem(Student), 2006  
VARLI S., Bilgisayar ile Kablosuz Olarak Haberleşen Paletli Bir Aracın ve Çift Yönlü İletişim Protokolünün Mekanik, Elektronik ve Yazılımsal Olarak Gerçeklenmesi, Postgraduate, A.Yanarsoy(Student), 2006  
VARLI S., Saklı Markov Model Kullanılarak Görüntüden Gerçek Zamanlı Türk İşaret Dili Tanıma Sistemi, Postgraduate, H.Haberdar(Student), 2005

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **An enhanced Swin Transformer for soccer player reidentification**  
Akan S., VARLI S., Bhuiyan M. A. N.  
Scientific Reports, vol.14, no.1, 2024 (SCI-Expanded)
- II. **ConvNext Mitosis Identification—You Only Look Once (CNMI-YOLO): Domain Adaptive and Robust Mitosis Identification in Digital Pathology**  
TOPUZ Y., Yıldız S., VARLI S.  
Laboratory Investigation, vol.104, no.10, 2024 (SCI-Expanded)
- III. **Datasets and methods of product recognition on grocery shelf images using computer vision and machine learning approaches: An exhaustive literature review**  
Melek C. G., Battini Sönmez E., VARLI S.  
Engineering Applications of Artificial Intelligence, vol.133, 2024 (SCI-Expanded)
- IV. **Elevating healthcare through artificial intelligence: analyzing the abdominal emergencies data set (TR\_ABDOMEN\_RAD\_EMERGENCY) at TEKNOFEST-2022**  
Koç U., SEZER E., Özkaya Y. A., Yarbay Y., Beşler M. S., Taydaş O., YALÇIN A., Evrimler Ş., Kızıoğlu H. A., Kesimal U., et al.  
European Radiology, vol.34, no.6, pp.3588-3597, 2024 (SCI-Expanded)
- V. **Improvement proposals for lesion segmentation on dermoscopic images Dermoskopik görüntülerde lezyon bölütleme için iyileştirme önerileri**  
Arpacı S. A., VARLI S.  
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.40, no.1, pp.251-263, 2024 (SCI-Expanded)
- VI. **Development of a Hybrid Method for Multi-Stage End-to-End Recognition of Grocery Products in Shelf Images**  
Melek C. G., Battini Sonmez E., Ayral H., VARLI S.  
Electronics (Switzerland), vol.12, no.17, 2023 (SCI-Expanded)

- VII. **Use of deep learning in soccer videos analysis: survey**  
 Akan S., Varlı S.  
 Multimedia Systems, vol.29, no.3, pp.897-915, 2023 (SCI-Expanded)
- VIII. **TRCaptionNet: A novel and accurate deep Turkish image captioning model with vision transformer based image encoders and deep linguistic text decoders**  
 Yildiz S., Memiş A., VARLI S.  
 Turkish Journal of Electrical Engineering and Computer Sciences, vol.31, no.6, pp.1079-1098, 2023 (SCI-Expanded)
- IX. **A turnaround control system to automatically detect and monitor the timestamps of ground service actions in airports: A deep learning and computervision based approach br**  
 Yildiz S., Aydemir O., Memis A., VARLI S.  
 ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, vol.114, 2022 (SCI-Expanded)
- X. **Fast and Accurate Registration of the Proximal Femurs in Bilateral Hip Joint Images by Using the Random Sub-Sample Points**  
 Memiş A., VARLI S., Bilgili F.  
 IRBM, vol.43, pp.130-141, 2022 (SCI-Expanded)
- XI. **Image based quantification of the proximal femur shape deformities in 3D by using the contralateral healthy shape structure: A preliminary study**  
 Memis A., VARLI S., Bilgili F.  
 BIOMEDICAL SIGNAL PROCESSING AND CONTROL, vol.71, 2022 (SCI-Expanded)
- XII. **A novel approach for computerized quantitative image analysis of proximal femur bone shape deformities based on the hip joint symmetry**  
 Memiş A., VARLI S., Bilgili F.  
 Artificial Intelligence in Medicine, vol.115, 2021 (SCI-Expanded)
- XIII. **Semantic segmentation of the multiform proximal femur and femoral head bones with the deep convolutional neural networks in low quality MRI sections acquired in different MRI protocols**  
 Memis A., VARLI S., Bilgili F.  
 COMPUTERIZED MEDICAL IMAGING AND GRAPHICS, vol.81, 2020 (SCI-Expanded)
- XIV. **Knee Meniscus Segmentation and Tear Detection from MRI: A Review**  
 Saygılı A., Varlı S.  
 Current Medical Imaging Reviews, vol.14, pp.1-13, 2020 (SCI-Expanded)
- XV. **Computerized 2D detection of the multiform femoral heads in magnetic resonance imaging (MRI) sections with the integro-differential operator**  
 Memis A., Varlı S., Bilgili F.  
 BIOMEDICAL SIGNAL PROCESSING AND CONTROL, vol.54, 2019 (SCI-Expanded)
- XVI. **A new scheme for automatic 2D detection of spheric and aspheric femoral heads: A case study on coronal MR images of bilateral hip joints of patients with Legg-Calve-Perthes disease**  
 Memis A., Albayrak S., Bilgili F.  
 COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, vol.175, pp.83-93, 2019 (SCI-Expanded)
- XVII. **An efficient and fast computer-aided method for fully automated diagnosis of meniscal tears from magnetic resonance images**  
 Saygili A., Albayrak S.  
 ARTIFICIAL INTELLIGENCE IN MEDICINE, vol.97, pp.118-130, 2019 (SCI-Expanded)
- XVIII. **Hermite-based texture feature extraction for classification of humeral head in proton density-weighted MR images**  
 Sezer A., Sezer H. B., Albayrak S.  
 NEURAL COMPUTING & APPLICATIONS, vol.28, pp.3021-3033, 2017 (SCI-Expanded)
- XIX. **A new computer-based approach for fully automated segmentation of knee meniscus from magnetic resonance images**  
 Saygılı A., Albayrak S.  
 BIOCYBERNETICS AND BIOMEDICAL ENGINEERING, vol.37, pp.432-442, 2017 (SCI-Expanded)
- XX. **Automatic segmentation of cartilage in high-field magnetic resonance images of the knee joint with**

**an improved voxel-classification-driven region-growing algorithm using vicinity-correlated subsampling**

Öztürk C., Albayrak S.

COMPUTERS IN BIOLOGY AND MEDICINE, vol.72, pp.90-107, 2016 (SCI-Expanded)

- XXI. **Content-based texture image retrieval by histogram of curvelets**  
Uslu E., Albayrak S.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.24, pp.2498-2512, 2016 (SCI-Expanded)
- XXII. **A facial component-based system for emotion classification**  
Sonmez E., Albayrak S.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.24, pp.1663-1673, 2016 (SCI-Expanded)
- XXIII. **Segmentation of Bone with Region Based Active Contour Model in PD Weighted MR Images of Shoulder.**  
Sezer A., Sezer H., Albayrak S.  
Computational and mathematical methods in medicine, vol.2015, pp.754894, 2015 (SCI-Expanded)
- XXIV. **Curvelet-Based Synthetic Aperture Radar Image Classification**  
Uslu E., Albayrak S.  
IEEE GEOSCIENCE AND REMOTE SENSING LETTERS, vol.11, pp.1071-1075, 2014 (SCI-Expanded)
- XXV. **Synthetic Aperture Radar Image Clustering with Curvelet Subband Gauss Distribution Parameters**  
Uslu E., Albayrak S.  
REMOTE SENSING, vol.6, pp.5497-5519, 2014 (SCI-Expanded)
- XXVI. **Critical parameters of the sparse representation-based classifier**  
Sonmez E. B., Albayrak S.  
IET COMPUTER VISION, vol.7, pp.500-507, 2013 (SCI-Expanded)
- XXVII. **An evaluation of local interest regions for non-rigid object class recognition**  
Altun O., Albayrak S.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.39, pp.2335-2340, 2012 (SCI-Expanded)
- XXVIII. **Turkish fingerspelling recognition system using Generalized Hough Transform, interest regions, and local descriptors**  
Altun O., Albayrak S.  
PATTERN RECOGNITION LETTERS, vol.32, no.13, pp.1626-1632, 2011 (SCI-Expanded)
- XXIX. **Visualization and analysis of classifiers performance in multi-class medical data**  
Diri B., Albayrak S.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.34, pp.628-634, 2008 (SCI-Expanded)
- XXX. **Unsupervised clustering methods for medical data: An application to thyroid gland data**  
ALBAYRAK S.  
ARTIFICIAL NEURAL NETWORKS AND NEURAL INFORMATION PROCESSING - ICAN/ICONIP 2003, vol.2714, pp.695-701, 2003 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Artificial Intelligence in Healthcare Competition (TEKNOFEST-2021): Stroke Data Set.**  
Koç U., Sezer E., Özkaya Y. A., Yarbay Y., Taydaş O., Ayyıldız V. A., Kızıloğlu H. A., Kesimal U., Çankaya İ., Beşler M. S., et al.  
The Eurasian journal of medicine, vol.54, no.3, pp.248-258, 2022 (ESCI)
- II. **Quantification of 2D shape variation of abnormal proximal femurs over normal proximal femurs in bilateral hip MRI: A computerized analysis for Legg-Calve-Perthes disease**  
Memiş A., VARLI S., BİLGİLİ F.  
Procedia Computer Science, vol.158, pp.426-435, 2019 (Scopus)

- III. **Effects of Population, Generation and Test Case Count on Grammatical Genetic Programming for Integer Lists**  
Ayrıl H., Albayrak S.  
Journal of Software, vol.12, no.5, pp.1-5, 2017 (Peer-Reviewed Journal)
- IV. **Tiroit Bezi Verilerinin Bayes ve EnYakın K-Komşu gibi Eğitici Yöntemlerle Sınıflandırılması**  
ALBAYRAK S.  
DİE İstatistik Araştırma Dergisi, vol.1, no.1, 2002 (Non Peer-Reviewed Journal)
- V. **Color Quantization by Modified K-Means Algorithm**  
ALBAYRAK S.  
Pakistan Journal of Applied Sciences, vol.1, no.4, 2001 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **HTML-CSS-Web Siteleri Tasarlamak ve Oluşturmak**  
Dağ H., VARLI S.  
Nobel Yayın Dağıtım, İstanbul, 2017

## Refereed Congress / Symposium Publications in Proceedings

- I. **Turkish Image Captioning with Vision Transformer Based Encoders and Text Decoders Görü Dönüştürücü Tabanlı Kodlayıcılar ve Metin Kod Çözücüler ile Türkçe Görüntü Altyazılama**  
Yıldız S., MEMİŞ A., VARLI S.  
32nd IEEE Conference on Signal Processing and Communications Applications, SIU 2024, Mersin, Turkey, 15 - 18 May 2024
- II. **Segmentation of Cell Nuclei in Histology Images with Vision Transformer Based U-Net Models Görü Dönüştürücü Tabanlı U-Net Modeller ile Histoloji Görüntülerinde Hücre Çekirdeği Bölütlenme**  
Yıldız S., MEMİŞ A., VARLI S.  
32nd IEEE Conference on Signal Processing and Communications Applications, SIU 2024, Mersin, Turkey, 15 - 18 May 2024
- III. **Semantic and Instance Segmentation of Multi-organ Cell Nuclei Using Deep Learning Based Methods Derin Öğrenmeye Dayalı Yöntemler Kullanılarak Çoklu-organ Hücre Çekirdeklerinin Anlamsal ve Örnek Bölütlenmesi**  
Yıldız S., MEMİŞ A., VARLI S.  
32nd IEEE Conference on Signal Processing and Communications Applications, SIU 2024, Mersin, Turkey, 15 - 18 May 2024
- IV. **Nuclei Instance Segmentation in Colon Histology Images with YOLOv7**  
Yıldız S., Memiş A., VARLI S.  
2nd International Conference on Advanced Engineering, Technology and Applications, ICAETA 2023, İstanbul, Turkey, 10 - 11 March 2023, vol.1983 CCIS, pp.335-343
- V. **Size-based Adaptive Instance Pruning for Refined Segmentation of Cell Nuclei in Histology Images Histoloji Görüntülerinde Hücre Çekirdeklerinin Daha İyi Bölütlenmesi için Boyut-bazlı Uyarlanabilir Örnek Budama**  
Yıldız S., Memiş A., VARLI S.  
31st IEEE Conference on Signal Processing and Communications Applications, SIU 2023, İstanbul, Turkey, 5 - 08 July 2023
- VI. **Deep Learning Approaches for Type-1 Diabetes: Blood Glucose Prediction**  
ÇELİK M. G., VARLI S.  
7th International Conference on Computer Science and Engineering, UBMK 2022, Diyarbakır, Turkey, 14 - 16 September 2022, pp.263-267

- VII. **Automatic classification of the waldenstrom stages of legg-calve-perthes disease from the 2D total proximal femur shape deformity**  
Memis A., VARLI S., BİLGİLİ F.  
2021 International Conference on INnovations in Intelligent SysTems and Applications, INISTA 2021, Kocaeli, Turkey, 25 - 27 August 2021
- VIII. **EncU-Net: A modified U-net for dermoscopic image segmentation EncU-Net: Dermoskopik görüntü bölütlemesi için modifiye edilmiş U-net**  
Arpaci S. A., VARLI S.  
29th IEEE Conference on Signal Processing and Communications Applications, SIU 2021, Virtual, Istanbul, Turkey, 9 - 11 June 2021
- IX. **Random point sub-sampling in rigid registration of 2D proximal femur surfaces 2B proksimal femur yüzeylerinin kati olarak çakiştirilmasında rastgele nokta alt-örnekleme**  
Memis A., VARLI S., BİLGİLİ F.  
29th IEEE Conference on Signal Processing and Communications Applications, SIU 2021, Virtual, Istanbul, Turkey, 9 - 11 June 2021
- X. **3D Femoral Head Detection in MRI Data Sequences with the Integro-differential Operator**  
Memis A., VARLI S., BİLGİLİ F.  
2020 Medical Technologies Congress, TIPTEKNO 2020, Antalya, Turkey, 19 - 20 November 2020
- XI. **Femoral Head Segmentation with Convolutional Neural Networks in MR Imaging Slices of the Patients with Legg-Calve-Perthes Disease Evrisimsel Sinir Aglari ile Legg-Calve-Perthes Hastalarına Ait MR Goruntuleme Kesitlerinde Femur Basi Bolutleme**  
Memis A., VARLI S., BİLGİLİ F.  
28th Signal Processing and Communications Applications Conference, SIU 2020, Gaziantep, Turkey, 5 - 07 October 2020
- XII. **Customer Churn Analysis**  
Yildiz S., Aydemir O., Yilmaz I., Say A., Varlı S.  
Signal Processing and Communications Applications Conference (SIU), İstanbul, Turkey, 5 - 07 October 2020, pp.1-5
- XIII. **Retinal Vessel Segmentation with Differentiated U-Net Network**  
Arpaci S. A., Varlı S.  
Signal Processing and Communications Applications Conference (SIU), Gaziantep, Turkey, 5 - 07 October 2020, pp.1-5
- XIV. **Object Detection in Shelf Images with YOLO**  
MELEK C. G., SÖNMEZ E., VARLI S.  
IEEE EUROCON 2019, 1 - 04 July 2019
- XV. **Derin Öğrenme ile Diyabetik Retinopati Siniflandırılması**  
Arpaci S. A., Varlı S.  
4.Uluslararası Bilimsel Araştırmalar Kongresi UBAK2019, Yalova, Turkey, 14 - 17 February 2019, pp.1-5
- XVI. **MR Görüntülerin Bölütlenmesinde Kullanılan Medikal Yazılım Araçlarına Kısa Bir Bakış**  
Memiş A., VARLI S., BİLGİLİ F.  
TIPTEKNO 2018- Tıp Teknolojileri Kongresi, 8 - 10 November 2018
- XVII. **Identifying of Alphanumerical Codes in Promotional products by Using of Deep Neural Network**  
Gider Ç., VARLI S.  
2018 3rd International Conference on Computer Science and Engineering (UBMK), Sarajevo, Bosnia and Herzegovina, Bosnia And Herzegovina, 20 - 23 September 2018, vol.1
- XVIII. **MR Görüntülerin Bölütlenmesinde Kullanılan Medikal Yazılım Araçlarına Kısa Bir Bakış**  
Memiş A., Varlı S.  
Tıp Teknolojileri Kongresi – TIPTEKNO 2018 , Gazimagusa, Cyprus (Kktc), 8 - 10 November 2018, pp.1-5
- XIX. **Segmentation of Femoral Cartilage with a Hybrid Method Combining Voxel Classification and Active Appearance Models**  
Öztürk C., VARLI S.

- 3rd International Conference on Biomedical Imaging, Signal Processing (ICBSP 2018), Bari, Italy, 11 October 2018, pp.1-8
- XX. **3D Detection of Spheric and Aspheric Femoral Heads in Coronal MR Images of Patients with Legg-Calve-Perthes Disease Using the Spherical Hough Transform**  
Memiş A., VARLI S.  
3rd International Conference on Biomedical Imaging, Signal Processing (ICBSP 2018), Bari, Italy, 11 October 2018, pp.1-8
- XXI. **3D detection of spheric and aspheric femoral heads in coronal MR images of patients with Legg-Calve-Perthes disease using the Spherical Hough Transform**  
Memiş A., VARLI S., BİLGİLİ F.  
3rd International Conference on Biomedical Imaging, Signal Processing, ICBSP 2018, Bari, Italy, 11 - 13 October 2018, pp.46-52
- XXII. **Segmentation of femoral cartilage with a hybrid method combining voxel classification and active appearance models**  
ÖZTÜRK C. N., VARLI S.  
3rd International Conference on Biomedical Imaging, Signal Processing, ICBSP 2018, Bari, Italy, 11 - 13 October 2018, pp.61-67
- XXIII. **Alfanümerik Promosyon Kodlarının Derin Sinir Ağı kullanarak Mobil Platformlarda Tanınması**  
Gider Ç., Varlı S.  
Uluslararası Bilgisayar Mühendisliği Kongresi, Sarajevo, Bosnia And Herzegovina, 20 September 2018, pp.1
- XXIV. **Femoral head detection in perthes MR slices with circular hough transform**  
MEMİŞ A., VARLI S., BİLGİLİ F.  
2018 26th Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018, vol.1
- XXV. **Meniscus tear classification using histogram of oriented gradients in knee MR images**  
SAYGILI A., ALBAYRAK S.  
2018 26th Signal Processing and Communications Applications Conference (SIU), Izmir, Turkey, Turkey, 2 - 05 May 2018, vol.1
- XXVI. **Diz Eklemi Menisküs Yapılarının Bölütlenmesinde Manyetik Rezonans Görüntüleme ve Farklı Uyarım Dizileri**  
SAYGILI A., ALBAYRAK S.  
II. International Scientific and Vocational Studies Congress, (BILMES EN-NAT 2018), Nevşehir, Turkey, 5 - 08 July 2018
- XXVII. **Perthes MR Kesitlerinde Dairesel Hough Dönüşümü ile Femur Başı Tespiti**  
Memiş A., Bilgili F., Albayrak S.  
26. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı, İzmir, Turkey, 02 May 2018, pp.1-2
- XXVIII. **Diz MR Görüntülerinde Yönelimli Gradyan Histogramları Kullanılarak Menisküs Yırtık Sınıflandırması**  
Saygılı A., Albayrak S.  
26. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı, İzmir, Turkey, 02 May 2018, pp.5-6
- XXIX. **A survey of product recognition in shelf images**  
MELEK C. G., SÖNMEZ E., ALBAYRAK S.  
International Conference on Computer Science and Engineering (UBMK), 5 - 08 October 2017
- XXX. **Harris Köşe Bulma Algoritmasının Hacimsel Görüntüler için Uygulanması**  
ÖZTÜRK C. N., ALBAYRAK S.  
Akıllı Sistemlerde Yenilikler ve Uygulamaları Konferansı (ASYU-2017), 5 - 07 October 2017
- XXXI. **Store Products Recognition and Counting System Using Computer Vision**  
Algburi M., Albayrak S.  
IEEE 2nd International Conference on Signal and Image Processing (ICSIP), Singapore, Singapore, 4 - 06 August 2017, pp.1-5
- XXXII. **Customer Churn Prediction in Telecommunication with Rotation Forest Method**  
Yılmaz M., ALBAYRAK S.



- The Ninth International Conference on Advances in Databases, Knowledge, and Data Applications, DBKDA 2017, Barselona, Spain, 21 May 2017, pp.1-5
- XXXIII. **Bulanık c-Ortalamalar Yöntemi ile Diz MR Görüntülerinde Menisküs Bölütlemesi ve Yırtık Tespiti**  
SAYGILI A., ALBAYRAK S.  
25. Sinyal İşleme ve Uygulamaları Kurultayı, 15 - 18 May 2017
- XXXIV. **Meniscus segmentation and tear detection in the knee MR images by fuzzy c-means method**  
SAYGILI A., ALBAYRAK S.  
2017 25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, Turkey, 15 - 18 May 2017, pp.1300-1304
- XXXV. **Predicting venues in location based social network**  
Almallah O., ALBAYRAK S.  
Seventh International Conference on Computer Science, Engineering and Applications (CCSEA 2017), Dubai, United Arab Emirates, 28 January 2017, pp.1-5
- XXXVI. **Veri Madenciliği Yöntemleri ile Mühendislik Fakültesi Öğrencilerinin Başarısını Etkileyen Faktörlerin Analizi**  
Saygılı A., Albayrak S.  
Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı (UBMK2016), Tekirdağ, Turkey, 20 - 23 October 2016
- XXXVII. **Modelling User's Location Check-ins on Location-Based Social Networks**  
Nasirov N., ALBAYRAK S.  
3rd European Conference on Social Media, Caen, France, 12 July 2016, pp.1-5
- XXXVIII. **Turkish Sign Language Recognition Using Hidden Markov Model**  
Kakayev K., ALBAYRAK S.  
Fourth International Conference on Signal Image Processing and Multimedia (SIPM 2016), Zürih, Switzerland, 25 June 2016, pp.1-5
- XXXIX. **Diz MR Görüntülerinde Menisküs Bölgelerinin Otomatik Tespiti**  
Saygılı A., Varlı S.  
24. Sinyal İşleme ve Uygulamaları Kurultayı, Zonguldak, Turkey, 16 - 19 May 2016
- XL. **Location Prediction in Location-based Social Networks**  
Baydar M., ALBAYRAK S.  
6th World Conference on Innovation and Computer Science, Antalya, Turkey, 12 May 2016, pp.1-5
- XLI. **Classification of bone pathologies with finite discrete shearlet transform based shape descriptors**  
SEZER A., SEZER H. B., ALBAYRAK S.  
Image Processing Theory, Tools and Applications (IPTA), 2015 International Conference on, Orleans, France, 10 November 2015, pp.293-297
- XLII. **An Identification Method of Normal and Edematous Humeral Head from PD Weighted MR Images Based on GLCM Texture Features**  
Sezer A., Sezer H., Varlı S.  
International Conference on Medical, Biological and Pharmaceutical Sciences, Paris, France, 11 April 2015, pp.1-5
- XLIII. **Segmentation of humeral head from axial proton density weighted shoulder MR images**  
Sezer A., Sezer H. B., Varlı S.  
Tenth International Symposium on Medical Information Processing and Analysis, Cartagena, Colombia, 29 - 31 January 2015, pp.1-5
- XLIV. **User based and item based collaborative filtering with temporal dynamics**  
BAKIR Ç., ALBAYRAK S.  
2014 22nd Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014
- XLV. **Segmentation of humeral head from MR slices**  
SEZER A., SEZER H. B., ALBAYRAK S.  
2014 22nd Signal Processing and Communications Applications Conference, SIU 2014 - Proceedings, Trabzon, Turkey, 18 April 2014, pp.1399-1402
- XLVI. **Omuz MR Kesitlerinden Humerus Başının Bölütlenmesi**

- Sezer A., Sezer H., Varlı S.  
22. Sinyal İşleme ve Uygulamaları Kurultayı, Trabzon, Turkey, 22 April 2014, pp.1-5
- XLVII. **Segmentation of humeral head from MR slices Omuz MR kesitlerinden humerus başının bölütlenmesi**  
SEZER A., SEZER H. B., Albayrak S.  
2014 22nd Signal Processing and Communications Applications Conference, SIU 2014, Trabzon, Turkey, 23 - 25 April 2014, pp.1399-1402
- XLVIII. **A Kinect Based Sign Language Recognition System Using Spatio temporal Features**  
Memiş A., Albayrak S.  
The 6th International Conference on Machine Vision (ICMV 2013) , November 16-17, 2013, London, United Kingdom, 16 - 17 November 2013, pp.1-5
- XLIX. **An Iris Recognition System Based on Angular Radial Partitioning and Statistical Texture Analysis with Sum and Difference Histogram**  
Memiş A., Varlı S., Battini Sönmez E.  
2nd International Symposium on Computing in Informatics and Mathematics (ISCIM 2013), Tirane, Albania, 26 - 28 September 2013, pp.1-5
- L. **An Iris Recognition System Based on Angular Radial Partitioning and Statistical Texture Analysis with Sum & Difference Histogram**  
Varlı S., Battini Sönmez E., Memiş A.  
2nd International Symposium on Computing in Informatics and Mathematics (ISCIM 2013), Tirane, Albania, 26 September 2013, pp.1-5
- LI. **Alleviating the Class Imbalance Problem in Data Mining**  
Sarmanova A., Albayrak S.  
International Conference on Data Mining (DMIN13), Arizona, United States Of America, 22 - 25 July 2013, pp.1-5
- LII. **Turkish Sign Language recognition using spatio temporal features on Kinect RGB video sequences and depth maps**  
Memiş A., Albayrak S.  
Signal Processing and Communications Applications Conference (SIU 2013), Lefkoşa, Cyprus (Kkct), 23 - 26 April 2013, pp.1-5
- LIII. **Classification with Emotional Faces via a Robust Sparse Classifier 15 18 September 2012 Istanbul**  
Battini Sönmez E., ALBAYRAK S.  
3rd International Conference on Image Processing Theory, Tools and Applications (IPTA 2012), Turkey, 15 - 18 September 2012
- LIV. **Application of Self Organizing Maps to a Multivariate Dataset December 12 13 2011 Hong Kong**  
Korkmaz E. Ö., Albayrak S.  
International Conference on Business Intelligence and Financial Engineering (ICBIFE 2011), Kowloon, Hong Kong, 12 - 13 December 2011, pp.1-5
- LV. **Veri Madenciliği Teknikleri ile Böbrek Nakli Geçirmiş Hastalarda Koroner Arter Kalsifikasyonunun İncelenmesi**  
ALBAYRAK S.  
Tıp Teknolojileri Ulusal Kongresi TIPTEKNO2011, 01 October 2011
- LVI. **Automatic Recognition of Turkish Fingerspelling**  
Işıkdoğan F., ALBAYRAK S.  
International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2011), Turkey, İstanbul, Turkey, 15 June 2011, pp.264-267
- LVII. **Seyrek Yaklaşımlar ile Yüz Sınıflama**  
Battini Sönmez E., Varlı S.  
Sinyal İşleme ve Uygulamaları Kurultayı-SİU2011, Antalya, Turkey, 20 April 2011, pp.1-5
- LVIII. **El Şekli Tanıma ve Sınıflama**  
Varlı S., Yürekli M., Öncül S.  
Sinyal İşleme ve Uygulamaları Kurultayı-SIU2011, Antalya, Turkey, 22 April 2011, pp.1-5
- LIX. **Face Classification via Sparse Approximation**

Battini Sönmez E., ALBAYRAK S.

The Third European Workshop on Biometrics and Identity Management (BioID 2011), Brandenburg, Germany, Brandenburg, Germany, 08 March 2011, pp.1-5

- LX. **Face Classification via Sparse Approximation**  
Battini Sönmez E., Albayrak S.  
The Third European Workshop on Biometrics and Identity Management (BioID 2011, Bremen, Germany, 8 - 10 March 2011
- LXI. **Açısal Radyal Parçalamaya ve İstatistiksel Doku Analizine Dayalı İris Tanıma Sistemi**  
Varlı S., Memiş A.  
Akıllı Sistemlerde Yenilikler ve Uygulamaları Sempozyumu-ASYU2010, Kayseri, Turkey, 21 June 2010, pp.1-5
- LXII. **Recursive Partitioned DBSCAN**  
Tekbir M., Albayrak S.  
Signal Processing and Communications Applications Conference (SIU), 2010 IEEE 18th, Diyarbakır, Turkey, 22 - 24 April 2010, pp.1-5
- LXIII. **Özyinelemeli-Bölünmeli DBSCAN**  
Varlı S., Tekbir M.  
Sinyal İşleme ve Uygulamaları Kurultayı -SIU2010, Diyarbakır, Turkey, 21 April 2010, pp.1-5
- LXIV. **Rasgele Vektörlerle Biyometrik Yüz Tanıma**  
Varlı S., Battini Sönmez E.  
Sinyal İşleme ve Uygulamaları Kurultayı-SIU2010, Diyarbakır, Turkey, 21 April 2010, pp.1-5
- LXV. **Mining of Microarray Gene Expression Data**  
Musabayev R., ALBAYRAK S.  
International Symposium on Innovations in Intelligent Systems and Applications-INISTA2009, Turkey, Trabzon, Turkey, 29 June 2009, pp.1-5
- LXVI. **Aktif Görünüm Modeli Kullanarak Yüz Tanıma**  
Tırkaz Ç., Albayrak S.  
Sinyal İşleme ve İletişim Uygulamaları Kurultayı -SIU2009, Antalya, Turkey, 08 April 2009, pp.1-5
- LXVII. **Hızlı Hizalama, Kalın Kenar Bulma Ve Cezalandırılmalı Korelasyon İle Türk İşaret Dili Alfabesi Tanıma**  
ALTUN O., ALBAYRAK S.  
Sinyal İşleme ve İletişim Uygulamaları Kurultayı-SIU2007, Eskişehir, Turkey, 11 June 2007, pp.1-5
- LXVIII. **Turkish Fingerspelling Recognition System Using Axis of Least Inertia Based Fast Alignment**  
ALTUN O., ALBAYRAK S.  
19th Australian Joint Conference on Artificial Intelligence, Hobart, Australia, Hobart, Australia, 01 December 2006, pp.473-481
- LXIX. **Mobil İletişim Tabanlı Uzaktan Yönlendirilebilir Görüntü İzleme Sistemi**  
Koç Y., ALBAYRAK S.  
Sinyal İşleme ve İletişim Uygulamaları Kurultayı-SIU2006, Antalya, Turkey, 17 April 2006, pp.1-5
- LXX. **Color Image Compression using Self-Organizing Feature Map**  
DİRİ B., ALBAYRAK S.  
Intertanional Conference on Artificial Intelligence and Applications, Innsbruck, Austria, 13 February 2006, pp.1-5
- LXXI. **Content-Based Image Retrieval System Using Color Features**  
BİRİCİK G., ALBAYRAK S.  
International Symposium on Innovations in Intelligent Systems and Applications, İstanbul, Turkey, 15 June 2005, pp.13-16
- LXXII. **A Comparison Of Color Image Quantization Methods On Different Color Spaces**  
Varlı S., Biricik G.  
International Symposium on Innovations in Intelligent Systems and Applications-INISTA2005, Turkey, İstanbul, Turkey, 15 June 2005, pp.1-5
- LXXIII. **Renk Özelliğine Dayalı Bir İçerik Tabanlı Görüntü Erişim Sistemi**  
BİRİCİK G., ALBAYRAK S., KALIPSIZ O.  
Havacılıkta İleri Teknolojiler Sempozyumu, İstanbul, Turkey, 09 December 2004, pp.541-546

- LXXIV. **Renk Özelliđi ile İçerik Tabanlı Görüntü Eriřimi**  
BİRİCİK G., ALBAYRAK S.  
Havacılıkta İleri Teknolojiler Sempozyumu- HITEK2004, İstanbul, Turkey, 01 December 2004, pp.1-5
- LXXV. **Fuzzy C-Means Clustering on Medical Diagnostic Systems**  
ALBAYRAK S., AMASYALI M. F.  
International Twelfth Turkish Symposium on Artificial Intelligence and Neural Network, Çanakkale, Turkey, 02 July 2003, vol.1, pp.10-14
- LXXVI. **Fuzzy C Means Clustering on Medical Diagnostic Systems Çanakkale Turkey July 2 4 2003**  
Albayrak S., Amasyalı M. F.  
International Twelfth Turkish Symposium on Artificial Intelligence and Neural Networks (TAINN2003), Çanakkale, Turkey, 2 - 04 July 2003
- LXXVII. **Dairesel Bakışimli Renkli İmge Damgalama**  
Chouse C., ALBAYRAK S.  
Sinyal İşleme ve İletişim Uygulamaları Kurultayı-SIU2003, İstanbul, Turkey, 18 June 2003, pp.1-5
- LXXVIII. **Dayanıklı Sayısal Resim Damgalama**  
Varlı S., Chouse C.  
Elektrik -Elektronik- Bilgisayar Mühendisliđi Sempozyumu -ELECO 2002, Bursa, Turkey, 21 November 2002, pp.1-5
- LXXIX. **Tiroit Bezi Verilerinin Eğitici ve Eğitici-siz Yöntemlerle Sınıflanması**  
Varlı S.  
Sinyal İşleme ve İletişim Uygulamaları Kurultayı-SİU 2002, Denizli, Turkey, 12 June 2002, pp.1-5
- LXXX. **Color Image Quantization by Kohonen Neural Networks**  
Varlı S.  
The Sixteenth International Symposium on Computer and Information Sciences (ISCIS 2001), Turkey, Antalya, Turkey, 06 June 2001, pp.1-5
- LXXXI. **Renkli Görüntülerde Ađırlıklı K-means Yöntemi ile Renk Topaklama**  
Varlı S.  
9.Sinyal İşleme ve Uygulamaları Kurultayı -SİU 2001, Lefkořa, Cyprus (Kkct), 25 - 27 April 2001, pp.1-5
- LXXXII. **Content Based Image Retrieval by Different Color Spaces**  
Varlı S., Karşılıđ M.  
The Fifteenth International Symposium on Computer and Information Sciences (ISCIS 2000), Turkey, İstanbul, Turkey, 07 June 2000, pp.1-5
- LXXXIII. **B-Spline Fonksiyonları ile Görüntü Aradeđerleme işleminde Spline Katsayılarının İyileřtirilmesi**  
Varlı S., Demir D., Karşılıđ M.  
2.Yapay Zeka ve Yapay Sinir Ađları Sempozyumu, İstanbul, Turkey, 01 January 1993, pp.1-5

## Supported Projects

Varlı S., TUBITAK Project, Diz Eklemi MR Görüntülerinde Kıkırdak Doku ve Menisküs Bölütleme ve Ölçümleme, 2017 - 2019

VARLI S., Project Supported by Higher Education Institutions, Uzay-Zaman-Frekans Gösterimleri İle Sentetik Açıklık Radar Görüntülerinin İşlenmesi, 2011 - 2014

VARLI S., Project Supported by Higher Education Institutions, Kinect Rgb Görüntülerinde ve Derinlik Haritalarında Uzamn- zamansal Özellikleri Kullanarak İşaret Dili Tanıma, 2012 - 2013

VARLI S., Project Supported by Higher Education Institutions, Özdüzenleyici Haritaların Görselleřtirilmesi, 2011 - 2012

BİRİCİK G., VARLI S., Other International Funding Programs, Çoklu Ortam Veri Tabanlarında İçeriđe Dayalı Sorgulama Sistemi, 2004 - 2006

## Scientific Refereeing

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, August 2018  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, January 2017  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, November 2016  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, November 2016  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, August 2015  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, November 2013  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, November 2013  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, February 2013  
NEURAL PROCESSING LETTERS, Journal Indexed in SCI-E, November 2012  
IEEE TRANSACTIONS ON IMAGE PROCESSING, SCI Journal, June 2012  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, March 2012  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, February 2012  
NEURAL PROCESSING LETTERS, Journal Indexed in SCI-E, November 2011  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, October 2010  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, September 2010  
NEURAL PROCESSING LETTERS, Journal Indexed in SCI-E, June 2010  
NEURAL PROCESSING LETTERS, Journal Indexed in SCI-E, July 2009  
NEURAL PROCESSING LETTERS, Journal Indexed in SCI-E, July 2008

## **Scientific Research / Working Group Memberships**

Bilgisayarla Görme Araştırma Laboratuvarı, Yıldız Technical University, Türkiye, <http://vision.yildiz.edu.tr>, 2018 - Continues

## **Mobility Activity**

Research Scholarship Program, Guest Researcher, Brunel University, England, 2012 - 2012

## **Metrics**

Publication: 121

Citation (WoS): 176

Citation (Scopus): 328

H-Index (WoS): 9

H-Index (Scopus): 12

## **Awards**

Varlı S., Tübitak Yayın Teşvik Ödülü, Tübitak, September 2017

Varlı S., Tübitak Yayın Teşvik Ödülü, Tübitak, May 2016

Varlı S., Tübitak Yayın Teşvik Ödülü, Tübitak, August 2014

Varlı S., Tübitak Yayın Teşvik Ödülü, Tübitak, March 2014

Varlı S., Tübitak 2242-LİSANS ÖĞRENCİLERİ YAZILIM PROJELERİ YARIŞMASI-Eğitim Uygulamaları, Tübitak, June 2013

Varlı S., Tübitak Yayın Teşvik Ödülü, Tübitak, January 2012

Varlı S., Tübitak Yayın Teşvik Ödülü, Tübitak, July 2011

### **Non Academic Experience**

Other Public Institution, Türkiye Sağlık Enstitüleri Başkanlığı- TÜSEB, Türkiye Sağlık Veri Araştırmaları ve Yapay Zeka Uygulamaları Enstitüsü - TÜYZE

TÜRKİYE SAĞLIK ENSTİTÜLERİ BAŞKANLIĞI