

## Prof. Dr. MEHMET BİLGİNER GÜLMEZOĞLU

### Kişisel Bilgiler

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### Uluslararası Araştırmacı ID'leri

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Yoksis Araştırmacı ID: 12462

### Eğitim Bilgileri

Doktora, Anadolu Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr), Türkiye 1987 - 1992  
Yüksek Lisans, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Ve Elektronik Mühendisliği (YI) (Tezli), Türkiye 1983 - 1985

Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, Türkiye 1977 - 1983

### Yaptığı Tezler

Doktora, Ses Yolunun Matematiksel Modeli, Anadolu Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr), 1992

### Araştırma Alanları

Mühendislik ve Teknoloji

### Akademik Unvanlar / Görevler

Prof. Dr., Eskişehir Osmangazi Üniversitesi, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, Elektrik-Elektronik Mühendisliği Bölümü, 2008 - Devam Ediyor

Doç. Dr., Eskişehir Osmangazi Üniversitesi, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, Elektrik-Elektronik Mühendisliği Bölümü, 2002 - 2008

Yrd. Doç. Dr., Eskişehir Osmangazi Üniversitesi, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, Elektrik-Elektronik Mühendisliği Bölümü, 1993 - 2002

Öğretim Görevlisi, Anadolu Üniversitesi, Mühendislik-Mimarlık Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 1986 - 1993

### Verdiği Dersler

Digital Signal Processing, Lisans, 2020 - 2021

Linear Algebra, Lisans, 2019 - 2020

## SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Indifference subspace of deep features for lung nodule classification from CT images**  
Ashames M. M., DEMİR A., Koc M., Fidan M., ERGİN S., GÜLMEZOĞLU M. B., Barkana A., Gerek O. N.  
Expert Systems with Applications, cilt.262, 2025 (SCI-Expanded)
- II. **Are deep learning classification results obtained on CT scans fair and interpretable?**  
Ashames M. M. A., DEMİR A., Gerek O. N., Fidan M., GÜLMEZOĞLU M. B., ERGİN S., EDİZKAN R., Koc M., Barkana A., Calisir C.  
PHYSICAL AND ENGINEERING SCIENCES IN MEDICINE, cilt.47, sa.3, ss.967-979, 2024 (SCI-Expanded)
- III. **Applications of Machine Learning Algorithms in Nitrogen Fertilizer Management of Triticale**  
GÜLMEZOĞLU N., KUTLU İ., GÜLMEZOĞLU M. B.  
Journal of Scientific and Industrial Research, cilt.82, sa.10, ss.1055-1063, 2023 (SCI-Expanded)
- IV. **Neural network representations for the inter- and intra-class common vector classifiers**  
EDİZKAN R., Barkana A., Koc M., GÜLMEZOĞLU M. B., Ashames M. M., ERGİN S., Fidan M., DEMİR A., Calisir C., Gerek O. N.  
Digital Signal Processing: A Review Journal, cilt.142, 2023 (SCI-Expanded)
- V. **Necessary Conditions for Successful Application of Intra- and Inter-class Common Vector Classifiers**  
Koc M., ERGİN S., GÜLMEZOĞLU M. B., Fidan M., Gerek O. N., Barkana A.  
Arabian Journal for Science and Engineering, cilt.47, sa.8, ss.10101-10113, 2022 (SCI-Expanded)
- VI. **Classifying Wheat Genotypes using Machine Learning Models for Single Kernel Characterization System Measurements**  
Kutlu İ., Gülmezoğlu M. B., Karaduman Y.  
JOURNAL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, sa.80, ss.985-991, 2021 (SCI-Expanded)
- VII. **Face Recognition by Using 2D Orthogonal Subspace Projections**  
ERGİN S., IŞIK Ş., GÜLMEZOĞLU M. B.  
TRAITEMENT DU SIGNAL, cilt.38, sa.1, ss.51-60, 2021 (SCI-Expanded)
- VIII. **Two Pseudo-Common Vectors for Pattern Recognition**  
KOÇ M., GÜLMEZOĞLU M. B., ERGİN S., EDİZKAN R., Barkana A.  
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, cilt.45, sa.12, ss.10621-10635, 2020 (SCI-Expanded)
- IX. **Use of gradient and normal vectors for face recognition**  
KOÇ M., ERGİN S., GÜLMEZOĞLU M. B., EDİZKAN R., Barkana A.  
IET IMAGE PROCESSING, cilt.14, sa.10, ss.2121-2129, 2020 (SCI-Expanded)
- X. **Block-Based Noisy/Clean Classification of Images Using the Common Vector Approach**  
Kalyoncu H. B., ERGİN S., GÜLMEZOĞLU M. B.  
CIRCUITS SYSTEMS AND SIGNAL PROCESSING, cilt.39, sa.3, ss.1387-1418, 2020 (SCI-Expanded)
- XI. **A survey on ECG analysis**  
Berkaya S. K., UYSAL A. K., ŞORA GÜNAL E., ERGİN S., GÜNAL S., GÜLMEZOĞLU M. B.  
BIOMEDICAL SIGNAL PROCESSING AND CONTROL, cilt.43, ss.216-235, 2018 (SCI-Expanded)
- XII. **A subspace based progressive coding method for speech compression**  
Keser S., GEREK Ö. N., SEKE E., Gillmezoğlu M. B.  
SPEECH COMMUNICATION, cilt.94, ss.50-61, 2017 (SCI-Expanded)
- XIII. **On the realization of common matrix classifier using covariance tensors**  
ERGİN S., GEREK Ö. N., GÜLMEZOĞLU M. B., BARKANA A.  
DIGITAL SIGNAL PROCESSING, cilt.41, ss.110-117, 2015 (SCI-Expanded)
- XIV. **Automatic writer identification from text line images**  
Kirli O., GÜLMEZOĞLU M. B.  
INTERNATIONAL JOURNAL ON DOCUMENT ANALYSIS AND RECOGNITION, cilt.15, sa.2, ss.85-99, 2012 (SCI-Expanded)

- XV. **Common vector approach and its combination with GMM for text-independent speaker recognition**  
Sadık S., GÜLMEZOĞLU M. B.  
EXPERT SYSTEMS WITH APPLICATIONS, cilt.38, sa.9, ss.11394-11400, 2011 (SCI-Expanded)
- XVI. **Use of center of gravity with the common vector approach in isolated word recognition**  
GÜLMEZOĞLU M. B., EDİZKAN R., ERGİN S., BARKANA A.  
EXPERT SYSTEMS WITH APPLICATIONS, cilt.38, sa.4, ss.3690-3696, 2011 (SCI-Expanded)
- XVII. **A new implementation of common matrix approach using third-order tensors for face recognition**  
ERGİN S., Cakir S., GEREK Ö. N., GÜLMEZOĞLU M. B.  
EXPERT SYSTEMS WITH APPLICATIONS, cilt.38, sa.4, ss.3246-3251, 2011 (SCI-Expanded)
- XVIII. **An approach for bearing fault detection in electrical motors**  
Gulmezoglu M. B., ERGİN S.  
EUROPEAN TRANSACTIONS ON ELECTRICAL POWER, cilt.17, sa.6, ss.628-641, 2007 (SCI-Expanded)
- XIX. **The common vector approach and its comparison with other subspace methods in case of sufficient data**  
Gulmezoglu M. B., Dzhafarov V., Edizkan R., Barkana A.  
COMPUTER SPEECH AND LANGUAGE, cilt.21, sa.2, ss.266-281, 2007 (SCI-Expanded)
- XX. **On feature extraction for spam e-mail detection**  
Gunal S., ERGİN S., Gulmezoglu M. B., Gerek O. N.  
MULTIMEDIA CONTENT REPRESENTATION, CLASSIFICATION AND SECURITY, cilt.4105, ss.635-642, 2006 (SCI-Expanded)
- XXI. **Effect of the losses in the vocal tract on determination of the area function**  
Gulmezoglu M. B., Barkana A.  
BIO-MEDICAL MATERIALS AND ENGINEERING, cilt.13, sa.2, ss.159-166, 2003 (SCI-Expanded)
- XXII. **Robust Speech Recognition Using Affine Transform**  
ERGİN S., GÜLMEZOĞLU M. B., Atalay B.  
International Journal of Computational Intelligence Systems, cilt.1, sa.2, ss.271-273, 2003 (SCI-Expanded)
- XXIII. **The common vector approach and its relation to principal component analysis**  
Gulmezoglu M. B., Dzhafarov V., Barkana A.  
IEEE TRANSACTIONS ON SPEECH AND AUDIO PROCESSING, cilt.9, sa.6, ss.655-662, 2001 (SCI-Expanded)
- XXIV. **A novel approach to isolated word recognition**  
Gulmezoglu M. B., Dzhafarov V., Keskin M., Barkana A.  
IEEE TRANSACTIONS ON SPEECH AND AUDIO PROCESSING, cilt.7, sa.6, ss.620-628, 1999 (SCI-Expanded)
- XXV. **Effect of the signal measured from the glottis on determination of the vocal tract shape**  
Gulmezoglu M. B., Barkana A.  
ANNALS OF BIOMEDICAL ENGINEERING, cilt.26, sa.6, ss.1082-1090, 1998 (SCI-Expanded)

## **Diğer Dergilerde Yayınlanan Makaleler**

- I. **A Novel Framework for Cardiac Arrhythmia Classification Based on Subspace Projection and Decision Tree**  
ERGİN S., KAPLAN BERKAYA S., UYSAL A. K., ŞORA GÜNAL E., GÜNAL S., GÜLMEZOĞLU M. B.  
Eskişehir Technical University Journal of Science and Technology A - Applied Sciences and Engineering, cilt.21, sa.2, ss.350-365, 2020 (Hakemli Dergi)
- II. **Application of the common vector approach on identification of winter rapeseed (*Brassica napus* L.) cultivars and their yield characters**  
AYTAÇ Z., GÜLMEZOĞLU N., GÜLMEZOĞLU M. B.  
International Journal of Sustainable Agriculture Management and Informatics, cilt.2, sa.1, ss.66-78, 2016 (Hakemli Dergi)
- III. **A NOVEL FRAMEWORK FOR PARTITION-BASED FACE RECOGNITION**  
ERGİN S., GÜLMEZOĞLU M. B.

INTERNATIONAL JOURNAL OF INNOVATIVE COMPUTING INFORMATION AND CONTROL, cilt.9, sa.5, ss.1819-1834, 2013 (ESCI)

**IV. Detection of Stator Bearing and Rotor Faults in Induction Motors**

ERGİN S., Arzu U., GÜLMEZOĞLU M. B.

Procedia Engineering, cilt.30, ss.1103-1109, 2012 (Hakemli Dergi)

## **Kitap & Kitap Bölümleri**

**I. Lineer Cebir: Teori ve Octave Uygulamaları**

GÜLMEZOĞLU M. B., KESKİN K.

Eskişehir Osmangazi Üniversitesi Basımevi, Eskişehir, 2021

## **Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar**

**I. Classification of Triticale Cultivars Using Common Vector Approach and Support Vector Machine**

GÜLMEZOĞLU N., GÜLMEZOĞLU M. B.

2 ND INTERNATIONAL CONFERENCE ON FOOD, AGRICULTURE AND ANIMAL SCIENCES, Antalya, Türkiye, 8 - 11 Kasım 2019, ss.298-304

**II. Classification of Winter Rapeseed Cultivars and Their Yield Characters with the Common Vector Approach**

GÜLMEZOĞLU N., AYTAÇ Z., GÜLMEZOĞLU M. B.

7th International Conference on Information and Communication Technologies in Agriculture, Kavala, Yunanistan, 17 - 20 Eylül 2015, ss.713-719

**III. Some Approaches for Pattern Classification**

GÜLMEZOĞLU M. B.

International Conference on Chemical, Environmental and Biological Sciences, Dubai, Birleşik Arap Emirlikleri, 18 - 19 Mart 2015

**IV. Classification of bread wheat varieties and their yield characters with the common vector approach**

GÜLMEZOĞLU M. B., GÜLMEZOĞLU N.

International Conference on Chemical, Environmental and Biological Sciences, 18 - 19 Mart 2015

**V. ECG Based Biometric Authentication Using Ensemble of Features**

ERGİN S., UYSAL A. K., ŞORA GÜNAL E., GÜNAL S., GÜLMEZOĞLU M. B.

9th Iberian Conference on Information Systems and Technologies (CISTI), Barcelona, İspanya, 18 - 21 Haziran 2014

**VI. Detection of Stator, Bearing and Rotor Faults in Induction Motors**

ERGİN S., Uzuntas A., GÜLMEZOĞLU M. B.

International Conference on Communication Technology and System Design, Coimbatore, Hindistan, 7 - 09 Aralık 2011, cilt.30, ss.1103-1109

**VII. Detection of Stator Bearing and Rotor Faults in induction motors by using DWT coefficients in CVA**

ERGİN S., Arzu U., GÜLMEZOĞLU M. B.

Int. Conf. on Communication Technology and System Design, 7 - 09 Aralık 2011

**VIII. DWT Based Fault Diagnosis in Induction Motors by Using CVA**

ERGİN S., Serap T., GÜLMEZOĞLU M. B.

International Symposium on Innovations in Intelligent Systems and Applications, İstanbul, Türkiye, 15 - 17 Haziran 2011, ss.129-132

**IX. Stress Level Diagnosis for Automobile Drivers using Common Vector Approach**

ERGİN S., Dağ G., GÜLMEZOĞLU M. B.

6th International Advanced Technologies Symposium, Elazığ, Türkiye, 16 - 18 Mayıs 2011, ss.356-359

**X. Classification of bread wheat varieties and their yield characters with the common vector approach**

Gulmezoglu N., GÜLMEZOĞLU M. B.

8th European-Federation-for-Information-Technology-in-Agriculture, Food and the Environment / 8th World Congress on Computers in Agriculture, Prague, Çek Cumhuriyeti, 11 - 14 Temmuz 2011, ss.38-43

- XI. **2D DWT Based Feature Extraction for Face Recognition**  
Çakır S., ERGİN S., GÜLMEZOĞLU M. B.  
International Science and Technology Conference, Famagusta, Kıbrıs (Kktc), 27 - 29 Ekim 2010, ss.6-11
- XII. **Face recognition based on face partitions using Common Vector Approach**  
ERGİN S., GÜLMEZOĞLU M. B.  
3rd IEEE International Symposium on Control, Communications and Signal Processing (ISCCSP 2008), St Julians, Malta, 12 - 14 Mart 2008, ss.624-628
- XIII. **Endpoint detection of isolated words using center of gravity method**  
GÜLMEZOĞLU M. B., EDİZKAN R., ERGİN S., BARKANA A.  
IEEE 15th Signal Processing and Communications Applications Conference, Eskişehir, Türkiye, 11 - 13 Haziran 2007, ss.762-763
- XIV. **A two stage algorithm for face recognition: 2DPCA and within-class scatter minimization**  
Turhal U. C., Duysak A., GÜLMEZOĞLU M. B.  
4th IASTED International Conference on Signal Processing, Pattern Recognition and Applications, Innsbruck, Avusturya, 14 - 16 Şubat 2007, ss.338-339
- XV. **Common Vector Approach for Fault Detection of Induction Motors**  
ERGİN S., GÜLMEZOĞLU M. B.  
International Conference on Modeling and Simulation, Konya, Türkiye, 28 - 30 Ağustos 2006
- XVI. **Common Vector Approach for Handwritten Digit Recognition**  
Önder K., GÜLMEZOĞLU M. B.  
International Conference on Modeling and Simulation, Konya, Türkiye, 28 - 30 Ağustos 2006, ss.637-641
- XVII. **Improvements on Common Vector Approach for Multi Class Problems**  
EDİZKAN R., GÜLMEZOĞLU M. B., ERGİN S., ATALAY B.  
13th European Signal Processing Conference, Antalya, Türkiye, 4 - 08 Eylül 2005, ss.2246-2249
- XVIII. **Improvements on Isolated Word Recognition Using Subspace Methods**  
GÜLMEZOĞLU M. B., EDİZKAN R., ERGİN S., Atalay B.  
13th European Signal Processing Conference, Antalya, Türkiye, 4 - 08 Eylül 2005, ss.317-320
- XIX. **Face Recognition Using Common Matrix Approach**  
TURHAL Ü. Ç., GÜLMEZOĞLU M. B., Atalay B.  
13th European Signal Processing Conference, Antalya, Türkiye, 4 - 08 Eylül 2005, ss.369-372
- XX. **Use of Improved Feature Vectors in Spectral Subtraction Method**  
EMRAH B., ERGİN S., GÜLMEZOĞLU M. B.  
1st Int. Conference on Informatics, Çeşme, Türkiye, 1 - 04 Eylül 2004
- XXI. **Use of Improved Feature Vectors in Affine Transformation for Robust Speech Recognition**  
ERGİN S., GÜLMEZOĞLU M. B., ATALAY B.  
1st Int. Conference on Informatics, Çeşme, Türkiye, 1 - 04 Eylül 2004
- XXII. **Common Vector Approach in Multi Class Problems and Its Relation to Fisher s Linear Discriminant Analysis**  
GÜLMEZOĞLU M. B., VAKIF D., EDİZKAN R., ATALAY B.  
Second International Conference on Electrical and Electronics Engineering, Bursa, Türkiye, 7 - 11 Kasım 2001, ss.117-121
- XXIII. **The Common Vector Approach in Image Recognition**  
OLCAY Ö. Ç., GÜLMEZOĞLU M. B., DZHAFAROV V.  
Brain Machine'2000 Workshop, Ankara, Türkiye, 20 - 22 Aralık 2000, ss.45-50
- XXIV. **Text Dependent speaker recognition by Using Gram Schmidt Orthogonalization Method**  
GÜLMEZOĞLU M. B., BARKANA A.  
IASTED International Conference on Signal processing ve Communications, KANARYA ADALARI, İspanya, 11 - 13 Şubat 1998, ss.438-440

- XXV. **Isolated Word Recognition with Neural Network which Extracts Personal Differences**  
GÜLMEZOĞLU M. B., KESKİN M., BARKANA A.  
Eleventh International Symposium on Computer ve Information Sciences, Ankara, Türkiye, 6 - 08 Kasım 1996, ss.527-537
- XXVI. **Effect of the Losses in the Vocal Tract**  
GÜLMEZOĞLU M. B., BARKANA A.  
8. Mediterranean Electrotechnical Conference, Bari, İtalya, 13 - 16 Mayıs 1996, ss.1733-1736
- XXVII. **Isolated Word Recognition by Extracting Personal Differences**  
KESKİN M., GÜLMEZOĞLU M. B., PARLAKTUNA O., BARKANA A.  
The International Conference on Signal Processing Applications ve Technology, BOSTON, Amerika Birleşik Devletleri, 24 - 26 Ekim 1995, ss.1989-1992

## **Desteklenen Projeler**

- GÜLMEZOĞLU M. B., Yükseköğretim Kurumları Destekli Proje, Asenkron Motorlardan Alınan Titreşim Sinyalleri Kullanılarak Arıza Tespiti, 2017 - 2018
- Gülmezoğlu M. B., Ergin S., Yükseköğretim Kurumları Destekli Proje, Fizyolojik Sinyaller Kullanılarak Sürücülerin Sağlık Durumlarının İzlenmesi, 2012 - 2015
- Gülmezoğlu M. B., Edizkan R., Ergin S., Yükseköğretim Kurumları Destekli Proje, Ayrık Kelime Tanıma Oranlarının İyileştirilmesi, 2003 - 2004
- Edizkan R., Barkana A., Gülmezoğlu M. B., Künkçü Ü., Ecevit Künkçü Ş., TÜBİTAK Projesi, Sınırlı Sayıda Kelimenin Bilgisayar Tarafından Tanınması, 1993 - 1995

## **Metrikler**

- Yayın: 58  
Atıf (WoS): 318  
Atıf (Scopus): 649  
H-İndeks (WoS): 8  
H-İndeks (Scopus): 8

## **Akademi Dışı Deneyim**

- ESKİŞEHİR OSMANGAZİ ÜNİVERSİTESİ  
ANADOLU ÜNİVERSİTESİ  
ANADOLU ÜNİVERSİTESİ