

Assoc. Prof. NURHAN GÜRSEL ÖZMEN

Personal Information

Office Phone: [+90 462 377 2907](tel:+904623772907)

Fax Phone: [+90 462 377 3336](tel:+904623773336)

Email: gnurhan@ktu.edu.tr

Web: <https://avesis.ktu.edu.tr//gnurhan>

Address: KTÜ Makine Mühendisliği Bölümü 61080 Trabzon

International Researcher IDs

ScholarID: Cj0M_r4AAAAJ

ORCID: 0000-0002-7016-5201

Publons / Web Of Science ResearcherID: AAR-2115-2020

ScopusID: 36172706600

Yoksis Researcher ID: 31248

Education Information

Doctorate, Karadeniz Technical University, Fen Bilimleri, Makina Mühendisliği, Turkey 2005 - 2010

Postgraduate, Karadeniz Technical University, -, Makina Mühendisliği, Turkey 2001 - 2004

Undergraduate, Balıkesir University, Faculty Of Engineering, Makina Mühendisliği, Turkey 1997 - 2001

Foreign Languages

German, A1 Beginner

English, C1 Advanced

Dissertations

Doctorate, Beyin Bilgisayar Arayüzü Tasarımı İçin Farklı Zihinsel Aktiviteler Esnasında Oluşan EEG İşaretlerinin Analiz Edilmesi ve Sınıflandırılması, Karadeniz Technical University, Fen Bilimleri, Makina Mühendisliği, 2010

Postgraduate, Karada ve Sualtında Çalışan Esnek Kollu Robotların Modellenmesi ve Kontrolü, Karadeniz Technical University, -, Makina Mühendisliği, 2004

Research Areas

Robotics and Mechatronics Systems, Biosignal Processing, Mechanical Engineering, Machine Theory and Dynamics, System Dynamics and Control, Robotics, Mechanical Vibrations

Academic Titles / Tasks

Associate Professor, Karadeniz Technical University, Mühendislik Fakültesi, Makine Mühendisliği, 2023 - Continues

Assistant Professor, Karadeniz Technical University, Mühendislik Fakültesi, Makine Mühendisliği, 2011 - 2018

Other, Technische Universiteit Delft, Faculty Of Mechanical Engineering, Department Of Biomechanical Engineering, 2014

- 2015

Research Assistant, Universiteit Gent, Mühendislik Fakültesi, Otomatik Kontrol, 2005 - 2005

Academic and Administrative Experience

Anabilim Dalı Akademik Kurul Üyesi, Karadeniz Technical University, Sağlık Bilimleri Enstitüsü, 2018 - Continues

Courses

Technical English, Undergraduate, 2018 - 2019

Sistem Dinamiği ve Kontrol, Undergraduate, 2018 - 2019

ME 3001 System Dynamics and Control, Undergraduate, 2018 - 2019

Computer Programming, Undergraduate, 2017 - 2018

MAKİNA DİNAMİĞİ, Undergraduate, 2017 - 2018

Bilim ve Teknoloji Tarihi, Undergraduate, 2015 - 2016

Advising Theses

Gürsel Özmen N., Kognitif bozukluğu olmayan parkinson hastalarında erken tanı amaçlı klinik karar destek sistemi geliştirilmesi, Doctorate, N.BAKİ(Student), 2024

GÜRSEL ÖZMEN N., MEKANİZMA ANALİZİ İÇİN NOKTA KÜMESİ ÇÖZÜM YAKLAŞIMI VE TARAYICI TABANLI YAZILIM ARACI GELİŞTİRİLMESİ, Postgraduate, H.EMRE(Student), 2019

GÜRSEL ÖZMEN N., EEG İşaretlerinden Bilişsel Görevlerin ve Müzik Dinleme Görevlerinin analizi, Postgraduate, E.DURMUŞ(Student), 2015

Jury Memberships

Doctorate, Doctorate, Karadeniz Teknik Üniversitesi, January, 2021

Post Graduate, Post Graduate, Karadeniz Teknik Üniversitesi, December, 2020

Post Graduate, Post Graduate, Karadeniz Teknik Üniversitesi, June, 2020

Post Graduate, Tez Savunma Sınavı, Karadeniz Teknik Üniversitesi, December, 2015

Post Graduate, Tez Savunması, Karadeniz Teknik Üniversitesi, December, 2012

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Cooperative object transport via non-contact prehensile pushing by magnetic forces**
Gürsel Özmen N., Dokuyucu H. İ.
JOURNAL OF MECHANISMS AND ROBOTICS, vol.1, pp.1-42, 2024 (SCI-Expanded)
- II. **Achievements and future directions in self-reconfigurable modular robotic systems**
Dokuyucu H. İ., GÜRSEL ÖZMEN N.
Journal of Field Robotics, vol.40, no.3, pp.701-746, 2023 (SCI-Expanded)
- III. **Stabilization and tracking control of an x-z type inverted pendulum system using Lightning Search Algorithm tuned nonlinear PID controller**
GÜRSEL ÖZMEN N., Marul M.
ROBOTICA, vol.40, no.7, pp.2428-2448, 2022 (SCI-Expanded)
- IV. **Intelligent worm gearbox fault diagnosis under various working conditions using vibration, sound and thermal features**

- Karabacak Y. E., Gürsel Özmen N., Gümüşel L.
APPLIED ACOUSTICS, vol.186, 2022 (SCI-Expanded)
- V. **Common spatial pattern-based feature extraction and worm gear fault detection through vibration and acoustic measurements**
Karabacak Y. E., Gürsel Özmen N.
MEASUREMENT, vol.187, 2022 (SCI-Expanded)
- VI. **Experimental and numerical investigation of effects of different cavity geometries on flow in a rectangular channel**
ÖZMEN Y., AKSU E., GÜRSEL ÖZMEN N.
Journal Of The Faculty Of Engineering And Architecture Of Gazi University, vol.36, no.2, pp.627-640, 2021 (SCI-Expanded)
- VII. **WORM GEAR CONDITION MONITORING AND FAULT DETECTION FROM THERMAL IMAGES VIA DEEP LEARNING METHOD**
Karabacak Y. E., GÜRSEL ÖZMEN N., GÜMÜŞEL L.
Eksploatacja I Niezawodnosc-Maintenance And Reliability, vol.22, no.3, pp.544-556, 2020 (SCI-Expanded)
- VIII. **EXISTENCE OF NASH EQUILIBRIUM IN DIFFERENTIAL GAME APPROACH TO FORMATION CONTROL**
JOND H. B., NABIYEV V., Ozmen N., LUKAS D.
INTERNATIONAL JOURNAL OF ROBOTICS & AUTOMATION, vol.33, no.4, pp.428-434, 2018 (SCI-Expanded)
- IX. **A Biologically Inspired Approach to Frequency Domain Feature Extraction for EEG Classification**
Ozmen N., GÜMÜŞEL L., Yang Y.
COMPUTATIONAL AND MATHEMATICAL METHODS IN MEDICINE, 2018 (SCI-Expanded)
- X. **Modelling and control of manipulators with flexible links working on land and underwater environments**
GÜMÜŞEL L., Ozmen N.
ROBOTICA, vol.29, pp.461-470, 2011 (SCI-Expanded)

Articles Published in Other Journals

- I. **A Decision Support System For Early Stage Parkinson's Diagnosis from EEG Data Using Symbolic Mutual Information and KAC Features**
Baki N., GÜRSEL ÖZMEN N.
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.28, no.5, pp.912-923, 2024 (Peer-Reviewed Journal)
- II. **A New Bearing Fault Diagnosis Approach based on Common Spatial Pattern Features**
GÜRSEL ÖZMEN N., KARABACAK Y. E.
ENGINEERING SCIENCES, vol.12, no.4, pp.1545-1557, 2023 (Peer-Reviewed Journal)
- III. **A Non-Contact Object Delivery System Using Leader-Follower Formation Control for Multi-Robots**
Dokuyucu H. I., Gürsel Özmen N.
International Journal of Applied Methods in Electronics and Computers, vol.11, no.3, pp.134-144, 2023 (Peer-Reviewed Journal)
- IV. **DEVELOPING A MOTION MECHANISM FOR A SINGLE MODULE IN A SELF-RECONFIGURABLE MODULAR MICROROBOTICS SYSTEM BY USING EXTERNAL MAGNETIC ACTUATORS**
Dokuyucu H. I., Özmen N., Cora Ö. N.
Uludağ University Journal of the Faculty of Engineering, vol.27, no.3, pp.1061-1080, 2022 (Peer-Reviewed Journal)
- V. **Kendi Kendini Konfigüre Edebilen Robotik Bir Sistem için Mikro Ölçekte Elektromanyetik Dış Eyleyici Tabanlı Hareket Modeli Geliştirilmesi**
Dokuyucu H. İ., Gürsel Özmen N.
Kahramanmaraş Sütçü İmam Üniversitesi Sosyal Bilimler Dergisi, vol.25, no.3, pp.434-449, 2022 (Peer-Reviewed Journal)
- VI. **Rulmanlarda Titreşim Verilerinden Durum İzleme Ve Arıza Teşhisi İçin Derin Öğrenme Yönteminin Uygulanması**

GÜRSEL ÖZMEN N., Karabacak Y. E.

SELCUK UNIVERSITY JOURNAL OF ENGINEERING, SCIENCE AND TECHNOLOGY, vol.10, no.2, pp.346-365, 2022
(Peer-Reviewed Journal)

VII. EEG ANALYSIS OF REAL AND IMAGINARY ARM MOVEMENTS BY SPECTRAL COHERENCE

GÜRSEL ÖZMEN N.

Uludağ Üniversitesi Mühendislik Fakültesi Dergisi, vol.26, no.1, pp.109-126, 2021 (Peer-Reviewed Journal)

VIII. A pairwise output coding method for multi-class EEG classification of a self-induced BCI

Ozmen N., Gümüşel L.

International Journal of Optimization and Control: Theories and Applications, vol.8, no.2, pp.216-227, 2018
(Scopus)

IX. Can Music Classification be an Alternative for Brain Computer Interface Applications?

GÜRSEL ÖZMEN N., DURMUŞ E., SADREDDINI Z.

Uludağ Üniversitesi Mühendislik Fakültesi Dergisi, vol.22, no.2, pp.11-22, 2017 (Peer-Reviewed Journal)

X. Optimal Trajectory Planning of a Box Transporter Mobile Robot

JOND H. B., Akbarimajd A., GÜRSEL ÖZMEN N., Gharibzadeh S.

Journal of Advances in Computer Engineering and Technology, vol.2, no.3, pp.35-42, 2016 (Peer-Reviewed Journal)

XI. Time Distance Optimal Trajectory Planning For Mobile Robots On Straight And Circular Paths

JOND H. B., Akbarimajd A., GÜRSEL ÖZMEN N.

Journal of Advances in Computer Research, vol.2008, no.6148, 2014 (Peer-Reviewed Journal)

XII. Otobüs Süspansiyon Sisteminin Bulanık Mantıkla Kontrolü

GÜRSEL N., ALTAŞ İ. H., GÜMÜŞEL L.

OTOMASYON, no.176, pp.202, 2007 (Non Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. Parkinson Hastalığının Teşhisinde EEG-F1 Kanal Aktivitesinin Rolü

Baki N., GÜRSEL ÖZMEN N.

15. Tıp Bilişimi Kongresi, Trabzon, Turkey, 30 - 31 May 2024

II. Design and Development of a Multi Fingered Hand-Wrist Rehabilitation Robot for Stroke Patients

MARUL M., GÜRSEL ÖZMEN N.

1.st Int Tech Transfer Symposium, Samsun, Turkey, 6 - 08 May 2024

III. Kolmogorov Algoritmik Karmaşıklık ile Parkinson Hastalarının EEG Aktivitesinin Analizi

Baki N., Gürsel Özmen N.

14. Tıp Bilişimi Kongresi, İzmir, Turkey, 16 - 18 March 2023, vol.1, no.7163, pp.182-187

IV. An Early Diagnosis Approach for Parkinson Patients Without Cognitive Disorder from EEG Data

Gürsel Özmen N.

TIP TEKNOLOJİLERİ ULUSAL KONGRESİ , Antalya, Turkey, 31 October - 02 November 2022, pp.372-375

V. Performance Comparison of ANN Based Fault Detection of Worm Gears on Different Data Sets

Karabacak Y. E., Gürsel Özmen N., Gümüşel L.

The 11th International Symposium on Intelligent Manufacturing and Service Systems (IMSS), Sakarya, Turkey, 27 - 29 May 2021, pp.668-680

VI. Classification of Worm Gearbox Faults by SVM and K-NN

Karabacak Y. E., Gürsel Özmen N., Gümüşel L.

11th International Symposium on Intelligent Manufacturing and Service Systems, Sakarya, Turkey, 27 - 29 May 2021, pp.657-667

VII. Design and Development of a Continuum Robot for Industrial Inspection

GÜRSEL ÖZMEN N., AL N., BIÇAK S., ÇAVUŞLAR E.

IMSS'19 Proceedings of 10th International Symposium on Intelligent Manufacturing and Service Systems, 9 - 11 September 2019, pp.694-705

- VIII. **Integration Of The Exoskeleton Robot's Movement By Lagrange Method**
Gürsel Özmen N., Marul M.
UMTS 2019-Ulusal Makina Teorisi Sempozyumu, Hatay, Turkey, 4 - 06 September 2019, pp.12-19
- IX. **EL İÇİN GELİŞTİRİLEN DIŞ İSKELET ROBOTUNUN HAREKETİNİN LAGRANGE YÖNTEMİYLE ORTAYA KOYULMASI**
MARUL M., GÜRSEL ÖZMEN N.
Ulusal Makine Teorisi Sempozyumu, Hatay, Turkey, 04 September 2019, pp.338-345
- X. **Sonsuz Vidalı Redüktörlerin Kestirimci ve Önleyici Bakım Çalışmalarına Yönelik Geliştirilmiş Bir Deney Düzenegi**
Karabacak Y. E., GÜRSEL ÖZMEN N., GÜMÜŞEL L.
International Conference on Artificial Intelligence and Applied Mathematics in Engineering (ICAIAME 2019), Antalya, Turkey, 20 April 2019, pp.18
- XI. **Ters Sarkaç PID Parametrelerinin Sezgisel Algoritmalarla Optimizasyonu Optimization of Inverted Pendulum PID Parameters via Heuristic Methods**
MARUL M., GÜRSEL ÖZMEN N.
TOK 2018, Kayseri, Turkey, 12 September 2018
- XII. **Optimization of Inverted Pendulum PID Parameters via Heuristic Methods**
Marul M., Gürsel Özmen N.
OTOMATİK KONTROL ULUSAL SEMPOZYUMU, Kayseri, Turkey, 12 - 14 September 2018, pp.13-17
- XIII. **İnsan Kolunun Dinamik Hareketi Esnasında Model Parametrelerinin EMG ile Hesaplanması**
GÜRSEL ÖZMEN N., van der HELM F. C., Schouten A. C.
XXI. Biyomedikal Müh. Ulusal Toplantısı, (BİYOMUT 2017), Turkey, 24 - 26 November 2017
- XIV. **Calculation of Model Parameters by EMG During Dynamic Motion of Human Arm**
GÜRSEL ÖZMEN N., van der Helm F. C. T., Schouten A. C.
21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 November - 26 December 2017
- XV. **İnsan Kol Dinamiklerinin Farklı Koşullardaki Davranışının Kestirilmesi için Durum Çalışması**
GÜRSEL ÖZMEN N., van der HELM F. C., Schouten A. C.
XX. Biyomedikal Müh. Ulusal Toplantısı, (BİYOMUT 2016), Turkey, 3 - 05 November 2016
- XVI. **Algebraic Connectivity Approach to Formation Reconfiguration in Multi agent Systems**
BARGHI JOND H., NABIYEV V. V., GÜRSEL ÖZMEN N.
9th International Conference on Electrical and Electronics Engineering, ELECO 2015, Bursa, Turkey, 26 - 28 November 2015, pp.1148-1153
- XVII. **Algebraic Connectivity Approach to Formation Control**
JOND H. B., NABIYEV V. V., GÜRSEL ÖZMEN N.
International Conference on Electrical and Electronics Engineering (ELECO 2015), Bursa, Turkey, 26 November 2015
- XVIII. **Multi-agent Formation Control with Single Integrator Agent Dynamics**
Barghi Jond H., NABIYEV V., GÜRSEL ÖZMEN N.
ELECO 2015, Bursa, Turkey, 26 - 28 November 2015, pp.806-811
- XIX. **Beyin Bilgisayar Arayüzü Sistemlerinde Uygun Elektrot Seçimi ve Performans Artırımı**
DURMUŞ E., GÜRSEL ÖZMEN N.
IEEE 23. Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SIU 2015), Malatya, Turkey, 16 - 19 May 2015
- XX. **Estimation of time varying human arm dynamics**
GÜRSEL ÖZMEN N., VAN DER HELM F., SCHOUTEN A.
NeuroSIPE Symposium 2015, Zeist, Netherlands, 13 - 14 April 2015
- XXI. **Estimation of human arm dynamics during planar arm movements**
GÜRSEL ÖZMEN N., VAN DER HELM F., SCHOUTEN A.
5th Dutch Bio-Medical Engineering Conference 2015, Egmond aan Zee, Netherlands, 22 - 23 January 2015
- XXII. **Simple Robots Coordination with Local Communications in Multi Robot Exploration Problem**
BARGHI JOND H., GÜRSEL ÖZMEN N.
Otomatik Kontrol Ulusal Toplantısı, TOK 2015, Denizli, Turkey, 10 - 12 September 2015

- XXIII. **Selection of Proper Electrodes and Improving Performance in Brain Computer Interfaces**
Durmuş E., Ozmen N.
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015, pp.1142-1145
- XXIV. **EEG Verilerinden Farklı Müzik Türü ve Zihinsel Görevlerin Ayırt Edilmesi**
DURMUŞ E., SADREDDİNİ Z., GÜRSEL ÖZMEN N.
Akıllı sistemlerde Yenilik ve Uygulamaları, ASYU 2014, İzmir, Turkey, 9 - 10 October 2014
- XXV. **Beyin Bilgisayar Arayüzü Sistemleri İçin Uygun Öznitelik Ve Sınıflandırıcı Seçimi**
DURMUŞ E., SADREDDİNİ Z., GÜRSEL ÖZMEN N.
Otomatik Kontrol Ulusal Toplantısı TOK 2014, Kocaeli, Turkey, 11 - 13 September 2014
- XXVI. **Bir Yay Kütle Sisteminin Genişletilmiş Öngörülü Kendinden Uyarlamalı Kontrol Yöntemi (Epsac) İle Gerçek Zamanlı Kontrolü**
GÜRSEL ÖZMEN N.
16. Ulusal Makina Teorisi Sempozyumu,UMTS, Erzurum, Turkey, 12 - 13 September 2013, pp.405-412
- XXVII. **Classification of Real and Imaginary Hand Movements for a BCI Design**
GÜRSEL ÖZMEN N., GÜMÜŞEL L.
36th International Conference on Telecommunications and Signal Processing (TSP), Rome, Italy, 2 - 04 July 2013, pp.607-611
- XXVIII. **Beyin Bilgisayar Arayüzü İçin Zihinsel Görevler Esnasında Kaydedilen EEG İşaretlerine Yönelik Bir Öznitelik Çıkarma Yaklaşımı**
GÜRSEL ÖZMEN N., Gümüşel L.
Otomatik Kontrol Ulusal Toplantısı, TOK 2012, Niğde, Turkey, 11 - 13 October 2012, pp.755-761
- XXIX. **Discrimination Between Mental and Motor Tasks of EEG Signals Using Different Classification Methods**
GÜRSEL ÖZMEN N., Gümüşel L.
Int. Symp. on Intelligent Systems and Applications, INISTA 2011, Trabzon, Turkey, 15 - 17 June 2011, pp.143-147
- XXX. **Mental and Motor Task Classification by LDA**
GÜRSEL ÖZMEN N., Gümüşel L.
MEDICON 2010, Chalkidiki, Greece, 28 - 29 May 2010, pp.172-175
- XXXI. **Comparison of Parametric and Nonparametric Methods in Detection of EEG-based Mental Tasks**
GÜRSEL ÖZMEN N., Gümüşel L.
Int. Symp. on Intelligent Systems and Applications, INISTA 2009, İstanbul, Turkey, 29 - 01 June 2009, pp.397-401
- XXXII. **Fuzzy Control of a Bus Suspension System 5th Int Symp on Intelligent Manufacturing Systems**
GÜRSEL ÖZMEN N., ALTAŞ İ. H., GÜMÜŞEL L.
IMS 2006,Sakarya, Sakarya, Turkey, 29 - 31 May 2006
- XXXIII. **Fuzzy Control of a Bus Suspension System**
GÜRSEL ÖZMEN N., Altaş İ. H., Gümüşel L.
Int. Symp. on Intelligent Manufacturing Systems, Kocaeli, Turkey, 29 - 31 May 2006, pp.1170-0
- XXXIV. **Karada ve Sualtında Çalışan Esnek Uzun Robot Kollarının Bulanık Mantıkla Kontrolü**
GÜRSEL ÖZMEN N., Gümüşel L.
TİMAK, Tasarım-İmalat-Analiz Kongresi, Balıkesir, Turkey, 26 - 28 April 2006, pp.462-473
- XXXV. **Karada ve Sualtında Çalışan Esnek Uzun Robot Kolların Modellenmesi ve Kontrolü**
GÜRSEL ÖZMEN N., Gümüşel L.
12. Ulusal Makina Teorisi Sempozyumu UMTS, Kayseri, Turkey, 9 - 11 June 2005, vol.2, pp.603-614

Other Publications

- I. **Estimation Of Human Arm Dynamics During Planar Arm Movements**
GÜRSEL ÖZMEN N.
Technical Report, pp.1-45, 2015

II. Predictive Control of a Mechanical System

GÜRSEL ÖZMEN N.

Technical Report, pp.1-50, 2005

Memberships / Tasks in Scientific Organizations

Otomatik Kontrol Türk Milli Komitesi, Member, 2015 - Continues

Makina Teorisi Derneği (MAKTED), Principal Member, 2015 - Continues, Turkey

Makina Mühendisleri Odası, Member, 2002 - Continues

Scientific Refereeing

IEEE ACCESS, Journal Indexed in SCI-E, March 2021

IEEE ACCESS, Journal Indexed in SCI-E, December 2020

BIOMEDICAL SIGNAL PROCESSING AND CONTROL, Journal Indexed in SCI-E, October 2020

ROBOTICA, Journal Indexed in SCI-E, May 2020

Neural Computing And Applications, SCI Journal, May 2019

TUBITAK Project, October 2015

Scientific Research / Working Group Memberships

Eu Cost Action Ca18106 , Karadeniz Technical University, Turkey, <https://neuralarchcon.org/>, 2020 - Continues

4D-EEG Group, Technische Universiteit Delft, Netherlands, <http://www.4deeg.eu/>, 2014 - 2015

Metrics

Publication: 59

Citation (WoS): 112

Citation (Scopus): 144

H-Index (WoS): 6

H-Index (Scopus): 6

Congress and Symposium Activities

UMTS 2019, Attendee, Hatay, Turkey, 2019

IMSS 2019, Attendee, Sakarya, Turkey, 2019

ICAIME 2019, Attendee, Antalya, Turkey, 2019

BIYOMUT 2018, Attendee, İstanbul, Turkey, 2018

BIYOMUT2017, Attendee, İzmir, Turkey, 2017

TOK 2016, Attendee, Kayseri, Turkey, 2016

TOK 2015, Attendee, Denizli, Turkey, 2015

SIU 2015, Attendee, --Seçiniz--, Turkey, 2015

NeuroSIPE2015, Attendee, Utrecht, Netherlands, 2015

Dutch BME 2015, Attendee, Amsterdam, Netherlands, 2015

Scholarships

TÜBİTAK 2219 Yurtdışı Araştırma Bursu, TÜBİTAK, 2014 - Continues
Erasmus yurt dışı Eğitim bursu, University, 2005 - Continues

Non Academic Experience

Delft Technology University NETHERLANDS
University of Gent BELGIUM