

# Prof. LEVENT GÜMÜŞEL

## Personal Information

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## International Researcher IDs

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## Education Information

Doctorate, The Catholic University of America, Engineering Department, Mechanical Engineering, United States Of America 1986 - 1990

Postgraduate, The Catholic University of America, Engineering Department, Mechanical Engineering, United States Of America 1983 - 1986

Postgraduate, Istanbul Technical University, Sakarya Mühendislik Fakültesi, Makina Mühendisliği, Turkey 1981 - 1982

Undergraduate, Istanbul Technical University, Makina Fakültesi, Genel Makina Mühendisliği Bölümü, Turkey 1975 - 1980

## Foreign Languages

English, C1 Advanced

## Dissertations

Doctorate, A New Class Of Underwater Robots, The Catholic University of America, Engineering Department, Mechanical Engineering, 1990

Postgraduate, Buoyancy-Gravity Driven Underwater Robot, The Catholic University of America, Engineering Department, Mechanical Engineering, 1987

## Research Areas

Mechanical Engineering, Machine Theory and Dynamics, System Dynamics and Control, Robotics, Mechatronics, Engineering and Technology

## Academic Titles / Tasks

Professor, Karadeniz Technical University, Mühendislik Fakültesi, Makina Mühendisliği Bölümü, 2012 - Continues

Associate Professor, Karadeniz Technical University, Mühendislik Fakültesi, Makina Mühendisliği Bölümü, 1997 - 2012

Assistant Professor, Karadeniz Technical University, Mühendislik Fakültesi, Makina Mühendisliği Bölümü, 1991 - 1997

Research Assistant, The Catholic University of America, Engineering Department, Mechanical Engineering, 1984 - 1990

Research Assistant, Yildiz Technical University, Kocaeli Mühendislik Fakültesi, Makina Mühendisliği Bölümü, 1981 - 1982

## Academic and Administrative Experience

Karadeniz Technical University, Fen Bilimleri, 1996 - 1997

Karadeniz Technical University, Mühendislik Fakültesi, Makina Mühendisliği Bölümü, 1992 - 1995

## Courses

Tasarım Projesi, Undergraduate, 2015 - 2016

Technical English, Undergraduate, 2015 - 2016

System Dynamics and Control, Undergraduate, 2014 - 2015

Bitirme Çalışması, Undergraduate, 2015 - 2016

Computer Programming, Undergraduate, 2014 - 2015

Mekatronik Sistemler, Undergraduate, 2014 - 2015

Sistem Dinamiği ve Kontrol, Undergraduate, 2015 - 2016

Bilim ve Teknoloji Tarihi, Undergraduate, 2015 - 2016

Bilgisayar Programlama, Undergraduate, 2014 - 2015

Computer Programming, Undergraduate, 2014 - 2015

Robot ve Kinematiği, Undergraduate, 2015 - 2016

Robot Kinematiği ve Dinamiği, Postgraduate, 2013 - 2014

Makina Dinamiği, Undergraduate, 2009 - 2010

## Advising Theses

GÜMÜŞEL L., Yapay Sinir Ağları ve Paralel Akışlı Isı Eşanjörlerinde Uygulanması, Postgraduate, E.AYVAZ(Student), 2012

GÜMÜŞEL L., Yapay Sinir Ağları ve Ranque-Hilsch Vortex Tüpü Uygulamaları, Postgraduate, M.Eray(Student), 2011

GÜMÜŞEL L., Beyin Bilgisayar Arayüzü Tasarımı İçin Farklı Zihinsel Aktiviteler Esnasında Oluşan EEG Sinyallerinin Analiz Edilmesi ve Sınıflandırılması, Doctorate, N.GÜRSEL(Student), 2010

GÜMÜŞEL L., Karada ve Sualtında Çalışan Esnek kollu Robotların Modellenmesi ve Kontrolü, Postgraduate, N.GÜRSEL(Student), 2004

GÜMÜŞEL L., Klasik Kontrol Yöntemleri ve Bulanık Denetimin bir PMDC Motorda Denenerek Sonuçlarının Karşılaştırılması, Postgraduate, C.SAMYELİ(Student), 1998

GÜMÜŞEL L., N-kollu bir Robotun Çalışma Alanını Hesaplayan ve Çizen bir Programın Bilgisayar Yardımı ile Geliştirilmesi, Postgraduate, Y.AZAK(Student), 1993

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

- I. **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)
- II. **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)
- III. **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)

- IV. **Using artificial neural network for predicting performance of the Ranque-Hilsch vortex tube**  
Korkmaz M. E., GÜMÜŞEL L., MARKAL B.  
INTERNATIONAL JOURNAL OF REFRIGERATION-REVUE INTERNATIONALE DU FROID, vol.35, no.6, pp.1690-1696, 2012 (SCI-Expanded)
- V. **A comparative study on static and dynamic responses of FRP composite and steel suspension bridges**  
ADANUR S., Mosallam A. S., Shinozuka M., GÜMÜŞEL L.  
JOURNAL OF REINFORCED PLASTICS AND COMPOSITES, vol.30, no.15, pp.1265-1279, 2011 (SCI-Expanded)
- VI. **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)
- VII. **Modeling of Transverse Direction Thermal Conductivity in Micro-nano Fiber-reinforced Composites**  
Ascioğlu B., Adanur S., Gümüşel L., Baş H.  
TEXTILE RESEARCH JOURNAL, vol.79, no.12, pp.1059-1066, 2009 (SCI-Expanded)
- VIII. **Optimum design of a buoyancy and gravity-driven underwater robot**  
BAZ A., Gumusel L.  
JOURNAL OF ROBOTIC SYSTEMS, vol.13, no.7, pp.461-473, 1996 (SCI-Expanded)
- IX. **EXPERIMENTAL AND THEORETICAL EVALUATION OF THE BUOYANCY AND GRAVITY-DRIVEN UNDERWATER ROBOTS**  
GUMUSEL L., BAZ A.  
ROBOTICA, vol.13, pp.273-286, 1995 (SCI-Expanded)
- X. **BUOYANCY-POWERED AND GRAVITY-POWERED UNDERWATER ROBOTS**  
BAZ A., GUMUSEL L.  
INTERNATIONAL JOURNAL OF ROBOTICS RESEARCH, vol.9, no.5, pp.60-69, 1990 (SCI-Expanded)

### Articles Published in Other Journals

- I. **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)
- II. **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. **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
- II. **Rulmanlarda Bilezik Arızalarının Yapay Sinir Ağları ile Tespiti ve Sınıflandırılması**  
karabacak Y. E., KAHRAMAN H. T., GÜMÜŞEL L., YILMAZ C.  
Akıllı sistemlerde yenilikler ve uygulamaları, 5 - 07 October 2017
- III. **Predicting Ranque-Hilsch Vortex Tube Performance By Using ANNs**  
KORKMAZ M. E., MARKAL B., GÜMÜŞEL L.

3rd International Conference on Engineering and Natural Science - ICENS 2017, Budapeşte, Hungary, 3 - 07 May 2017, pp.377

- IV. **Using Artificial Neural Network for Predicting Performance of Heat Exchangers**  
KORKMAZ M. E., AYVAZ E., GÜMÜŞEL L.  
3rd International Conference on Engineering and Natural Science - ICENS 2017, Budapeşte, Hungary, 3 - 07 May 2017, pp.517
- V. **Textile Machinery And Processes For Composite Preform Manufacturing**  
Adanur S., Aglan H., Gümüşel L., Baş H.  
1st International Istanbul Textile And Textile Machinery Congress, İstanbul, Turkey, 1 - 02 June 2016
- VI. **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 2013), Roma, Italy, 2 - 04 July 2013, pp.607-611
- VII. **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
- VIII. **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
- IX. **Discrimination between mental and motor tasks of EEG signals using different classification methods**  
ÖZMEN N. G., GÜMÜŞEL L.  
2011 International Symposium on INnovations in Intelligent SysTems and Applications, INISTA 2011, İstanbul-Kadıkoy, Turkey, 15 - 18 June 2011, pp.143-147
- X. **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
- XI. **Mental and Motor Task Classification by LDA**  
GÜRSEL ÖZMEN N., Gümüşel L.  
MEDICON 2010, Chalkidiki, Greece, 28 - 29 May 2010, pp.172-175
- XII. **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
- XIII. **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
- XIV. **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
- XV. **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
- XVI. **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
- XVII. **A New Class of Fluid-Loops Dampers**  
Baz A., GÜMÜŞEL L.  
Damping'89, 8 - 10 February 1989
- XVIII. **POSITIVE POSITION CONTROL OF ROBOTIC MANIPULATORS**

BAZ A., GUMUSEL L.

ROBOTS 13 CONF, Maryland, United States Of America, 7 - 11 May 1989

## **Supported Projects**

GÜMÜŞEL L., Other International Funding Programs, Design and Processing Characteristics of Novel Three Dimensional Fibrous Preforms for Composite Reinforcement, 2004 - 2007

GÜMÜŞEL L., Project Supported by Other Official Institutions, KOBE Türbinin Tasarımı, 2005 - 2005

## **Metrics**

Publication: 32

Citation (WoS): 131

Citation (Scopus): 183

H-Index (WoS): 6

H-Index (Scopus): 7