Dr.Öğr.Üyesi MUHAMMET ÜNAL

Kişisel Bilgiler

E-posta: munal@marmara.edu.tr
Web: https://avesis.marmara.edu.tr/munal

Eğitim Bilgileri

Doktora, Marmara Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar-Kontrol Eğitimi (Yl) (Tezli), Türkiye 2008 - 2014
Yüksek Lisans, Marmara Üniversitesi, Fen Bilimleri Enstitüsü, Elektronik Ve Bilgisayar Eğitimi (Yl) (Tezli), Türkiye 2005 - 2008
Lisans, Marmara Üniversitesi, Teknik Eğitim Fakültesi, Elektronik ve Bilgisayar Eğitimi Bölümü, Türkiye 2001 - 2005

Yaptığı Tezler

Doktora, Sinyal işleme ve genetik-yapay sinir ağları ile rulman arızalarının teşhisi, Marmara Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar-Kontrol Eğitimi (Yl) (Tezli), 2014
Yüksek Lisans, PID kontrolörün karınca kolonisi / genetik algoritma tabanlı optimizasyonu ve Gunt RT 532 basınç prosesinin kontrolü, Marmara Üniversitesi, Fen Bilimleri Enstitüsü, Elektronik Ve Bilgisayar Eğitimi (Yl) (Tezli), 2008

Akademik Unvanlar / Görevler

Yrd.Doç.Dr., Marmara Üniversitesi, Teknoloji Fakültesi, Mekatronik Mühendisliği Bölümü, 2015 - Devam Ediyor
Araştırma Görevlisi, Marmara Üniversitesi, Teknik Eğitim Fakültesi, Elektronik ve Bilgisayar Eğitimi Bölümü, 2005 - Devam Ediyor
Araştırma Görevlisi, Marmara Üniversitesi, Teknoloji Fakültesi, Mekatronik Mühendisliği Bölümü, 2015 - 2015

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

I. **Development of comprehensive heterodyne effect based inspection (CHEBI) method for inclusive monitoring of cracks**
Baghalian A., Tashakori S., Senyurek V. Y., ÜNAL M., McDaniel D., Tansel I. N.
MEASUREMENT, cilt.128, ss.89-95, 2018 (SCI-Expanded)

II. **Implementation of heterodyning effect for monitoring the health of adhesively bonded and fastened composite joints**
Tashakori S., Baghalian A., Senyurek V. Y., ÜNAL M., McDaniel D., Tansel I. N.
APPLIED OCEAN RESEARCH, cilt.72, ss.51-59, 2018 (SCI-Expanded)

III. **Fault Diagnosis of Rolling Bearings Using Data Mining Techniques and Boosting**
Ünal M., Sahin Y., Onat M., Demetgul M., Küçük H.
JOURNAL OF DYNAMIC SYSTEMS MEASUREMENT AND CONTROL-TRANSACTIONS OF THE ASME, cilt.139, sa.2, 2017 (SCI-Expanded)

IV. **Contact and non-contact approaches in load monitoring applications using surface response to excitation method**
Tashakori S., Baghalian A., ÜNAL M., Fekrmandi H., Senyurek V. Y., McDaniel D., Tansel I. N.

MEASUREMENT, cilt.89, ss.197-203, 2016 (SCI-Expanded)

V. **A novel approach for classification of loads on plate structures using artificial neural networks**
Fekrmandi H., ÜNAL M., Neva S. R., Tansel I. N., McDaniel D.
MEASUREMENT, cilt.82, ss.37-45, 2016 (SCI-Expanded)

VI. **Fault diagnosis of rolling bearings using a genetic algorithm optimized neural network**
Ünal M., Onat M., Demetgul M., Küçük H.
MEASUREMENT, cilt.58, ss.187-196, 2014 (SCI-Expanded)

VII. **Use of Artificial Neural Networks for Modelling of Seam Strength and Elongation at Break**
YILDIZ Z., Dal V., ÜNAL M., YILDIZ K.
FIBRES & TEXTILES IN EASTERN EUROPE, cilt.21, sa.5, ss.117-123, 2013 (SCI-Expanded)

VIII. **Use of Artificial Neural Networks for Modelling of Seam Strength and Elongation at Break FIBRES TEXTILES in Eastern Europe**
YILDIZ Z., DAL V., ÜNAL M., YILDIZ K.
FIBRES & TEXTILES in Eastern Europe, cilt.5, ss.117-123, 2013 (SCI-Expanded)

IX. **Genetic Algorithm**
ÜNAL M., AK A., TOPUZ V., ERDAL H.
OPTIMIZATION OF PID CONTROLLERS USING ANT COLONY AND GENETIC ALGORITHMS, cilt.449, ss.19-29, 2013 (SCI-Expanded)

X. **Optimization of PID Controllers Using Ant Colony and Genetic Algorithms Introduction**
ÜNAL M., AK A., TOPUZ V., ERDAL H.
OPTIMIZATION OF PID CONTROLLERS USING ANT COLONY AND GENETIC ALGORITHMS, cilt.449, ss.1-3, 2013 (SCI-Expanded)

XI. **Ant Colony Optimization (ACO)**
ÜNAL M., AK A., TOPUZ V., ERDAL H.
OPTIMIZATION OF PID CONTROLLERS USING ANT COLONY AND GENETIC ALGORITHMS, cilt.449, ss.31-35, 2013 (SCI-Expanded)

XII. **An Application for Process System Control**
ÜNAL M., AK A., TOPUZ V., ERDAL H.
OPTIMIZATION OF PID CONTROLLERS USING ANT COLONY AND GENETIC ALGORITHMS, cilt.449, ss.37-68, 2013 (SCI-Expanded)

XIII. **Artificial Neural Networks**
ÜNAL M., AK A., TOPUZ V., ERDAL H.
OPTIMIZATION OF PID CONTROLLERS USING ANT COLONY AND GENETIC ALGORITHMS, cilt.449, ss.5-17, 2013 (SCI-Expanded)

XIV. **Optimization of PID Controllers Using Ant Colony and Genetic Algorithms Conclusion**
ÜNAL M., AK A., TOPUZ V., ERDAL H.
OPTIMIZATION OF PID CONTROLLERS USING ANT COLONY AND GENETIC ALGORITHMS, cilt.449, ss.69-72, 2013 (SCI-Expanded)

XV. **Trajectory tracking performance comparison between genetic algorithm and ant colony optimization for PID controller tuning on pressure process**
ÜNAL M., ERDAL H., TOPUZ V.
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, cilt.20, sa.3, ss.518-528, 2012 (SCI-Expanded)

XVI. **Trajectory Tracking Performance Comparision Between Genetic Algorithm and Ant Colony Optimization For PID Controller Tuning on Pressure Process**
ÜNAL M., ERDAL H., TOPUZ V.
Computer Applications in Engineering Education, cilt.1, ss.500-510, 2010 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

I. **Determination of damage length in aluminum 2024 T-3 plate by lamb wave**

ÜNAL M.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, cilt.23, sa.4, ss.399-404, 2017 (ESCI)

II. **Fault Diagnosis of Rolling Bearing Based on Feature Extraction and Neural Network Algorithm**
Ünal M., Demetgül M., Onat M., Küçük H.
Recent Advances in Electrical Engineering Series, cilt.10, ss.179-185, 2013 (Hakemli Dergi)

Kitap & Kitap Bölümleri

I. **Load Monitoring Using Surface Response to Excitation Method**
Tashakori S., Baghalian A., ÜNAL M., ŞENYÜREK V. Y., Fekrmandi H., McDaniel D., Tansel İ. N.
Mechanics of Composite and Multi functional Materials Volume 7 Proceedings of the 2016 Annual Conference on Experimental and Applied Mechanics, Ralph, W. CarterSingh, RamanTandon, GyaneshwarThakre, Piyush R.Zavattieri, PabloZhu, Yong, Editör, Springer International Publishing, ss.209-214, 2017

II. **Implementation of the Surface Response to Excitation Method for Pipes**
Baghalian A., Tashakori S., Fekrmandi H., ÜNAL M., ŞENYÜREK V. Y., McDaniel D., Tansel İ. N.
Mechanics of Composite and Multi functional Materials Volume 7 Proceedings of the 2016 Annual Conference on Experimental and Applied Mechanics, Ralph, W. CarterSingh, RamanTandon, GyaneshwarThakre, Piyush R.Zavattieri, PabloZhu, Yong, Editör, Springer International Publishing, ss.261-266, 2017

III. **Optimization of PID Controllers Using Ant Colony and Genetic Algorithms**
Ünal M., Ak A., Topuz V., Erdal H.
Springer, London/Berlin , Dordrecht, 2013

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

I. **Implementation of Heterodyne Effect in Structural Health Monitoring SHM Systems**
TANSEL I. N., ŞENYÜREK V. Y., ÜNAL M., BAGHALIAN A., TASHAKORI S.
The 29'th Florida Conference on Recent Advances in Roboticsand Robot Showcase, MIAMI, Amerika Birleşik Devletleri, 12 - 13 Mayıs 2016, ss.254-257

II. **Loose Bolt Detecting Sensorless SHM System**
TANSEL I. N., ŞENYÜREK V. Y., ÜNAL M., BAGHALIAN A., TASHAKORI S.
The 29'th Florida Conference on Recent Advances in Roboticsand Robot Showcase, MIAMI, Amerika Birleşik Devletleri, 12 - 13 Mayıs 2016, ss.258-261

III. **Loose Bolt Detection Using Smart Washers**
TANSEL I. N., ŞENYÜREK V. Y., ÜNAL M., AMIN B., SHERVIN T.
The 29'th Florida Conference on Recent Advances in Roboticsand Robot Showcase, MIAMI, Amerika Birleşik Devletleri, 12 - 13 Mayıs 2016, ss.220-224

IV. **Faults Diagnosıs of Bearing by Sound Analysis and Artificial Neural Networks**
ÜNAL M., ONAT M., DEMETGÜL M., KÜÇÜK H.
7th International Advanced Technologies Symposium (IATS'13), 30 Eylül - 02 Ekim 2013, ss.705-710

V. **Fault Diagnosis of Rolling Bearing Based on Feature Extraction and Neural Network Algorithm**
ÜNAL M., DEMETGÜL M., ONAT M., KÜÇÜK H.
6th WSEAS International Conference on Sensors and Signals, 21 - 23 Mart 2013, cilt.169, ss.179-185

VI. **Web Based Control Simulations Environment WBCSE for Control Education with MATLAB**
ÜNAL M., SAVAŞ K., TOPUZ V., ERDAL H.
International Educational Technology Conference (IETC 2010), 01 Eylül 2010

VII. **Genetic Optimized Wavelet Denoising for FOG Signals**
ŞENYÜREK V. Y., ÜNAL M., VAROL H. S.
International Symposium on INnovations in Intelligent SysTems and Applications, 21 - 24 Haziran 2010, ss.436-440

VIII. **Fault Diagnostics of a Small Scale Model of Industrial Temperature Control System**
DEMETGÜL M., ÜNAL M., ONAT M., Tansel I. N.
1 th International Symposium on Computing in Science & Engineering, 3 - 05 Haziran 2010

IX. **Cellular Neural Network training by ant colony optimization algorithm**
ÜNAL M., ONAT M., BAL A.
2010 IEEE 18th Signal Processing and Communications Applications Conference, Diyarbakir, Turkey, Türkiye, 22 - 24 Nisan 2010

X. **Reconstruction the complete image from random scattered pieces of image**
Kement C., KAZDAL F., Yanlik S., ÜNAL M., ONAT M.
2010 IEEE 18th Signal Processing and Communications Applications Conference, Diyarbakir, Turkey, 22 - 24 Nisan 2010

XI. **ISAC Robot Kolunun Yörünge Takibi İçin PID Kontrolörün Genetik Algoritma ile Optimizasyonu**
ÜNAL M., ERDAL H., TOPUZ V., ERGÜZEL T. T.
UMES'07 - Ulusal Teknik Eğitim, Mühendislik ve Eğitim Bilimleri Genç Araştırmacılar Sempozyumu, Kocaeli, Türkiye, 20 Haziran 2007, ss.404-407

XII. **ISAC Robot Kolunun Yörünge Takibi için PID Kontrolörün Genetik Algoritma İle Optimizasyonu**
ÜNAL M., ERDAL H., TOPUZ V., ERGÜZEL T. T.
Ulusal Teknik Eğitim ve Eğitim Bilimleri Genç Araştırmacılar Sempozyumu (UMES'07), Türkiye, 1 - 03 Haziran 2005

Metrikler

Yayın: 34
Atıf (WoS): 211
Atıf (Scopus): 270
H-İndeks (WoS): 8
H-İndeks (Scopus): 7

Akademi Dışı Deneyim

Florida International University, Mechanical and Material Engineering, Mechatronics Laboratory