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Education Information

Doctorate, Marmara University, Institute for Graduate Studies in Pure and Applied Sciences, Bilgisayar-Kontrol Eğitimi (YI) (Tezli), Turkey 2008 - 2014

Postgraduate, Marmara University, Institute for Graduate Studies in Pure and Applied Sciences, Elektronik Ve Bilgisayar Eğitimi (YI) (Tezli), Turkey 2005 - 2008

Undergraduate, Marmara University, Faculty of Technical Education, Electronic and Computer Education, Turkey 2001 - 2005

Dissertations

Doctorate, Sinyal işleme ve genetik-yapay sinir ağları ile rulman arızalarının teşhisi, Marmara Üniversitesi, Institute for Graduate Studies in Pure and Applied Sciences, Bilgisayar-Kontrol Eğitimi (YI) (Tezli), 2014

Postgraduate, PID kontrolörün karınca kolonisi / genetik algoritma tabanlı optimizasyonu ve Gunt RT 532 basınç prosesinin kontrolü, Marmara Üniversitesi, Institute for Graduate Studies in Pure and Applied Sciences, Elektronik Ve Bilgisayar Eğitimi (YI) (Tezli), 2008

Academic Titles / Tasks

Assistant Professor, Marmara University, Faculty of Technology, Mechatronic Engineering, 2015 - Continues

Research Assistant, Marmara University, Faculty of Technical Education, Electronic and Computer Education, 2005 - Continues

Research Assistant, Marmara University, Faculty of Technology, Mechatronic Engineering, 2015 - 2015

Published journal articles indexed by SCI, SSCI, and AHCI

- 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, vol.128, pp.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, vol.72, pp.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, vol.139, no.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, vol.89, pp.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, vol.82, pp.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, vol.58, pp.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, vol.21, no.5, pp.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, vol.5, pp.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, vol.449, pp.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, vol.449, pp.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, vol.449, pp.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, vol.449, pp.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, vol.449, pp.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, vol.449, pp.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, vol.20, no.3, pp.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, vol.1, pp.500-510, 2010 (SCI-Expanded)

Articles Published in Other Journals

- I. **Determination of damage length in aluminum 2024 T-3 plate by lamb wave**
ÜNAL M.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSİTESİ MUHENDİSLİK BİLİMLERİ DERGİSİ, vol.23, no.4, pp.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, vol.10, pp.179-185, 2013 (Peer-Reviewed Journal)

Books & Book Chapters

- 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.
in: 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, Editor, Springer International Publishing, pp.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.
in: 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, Editor, Springer International Publishing, pp.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

Refereed Congress / Symposium Publications in Proceedings

- I. **Implementation of Heterodyne Effect in Structural Health Monitoring SHM Systems**
TANSEL İ. N., ŞENYÜREK V. Y., ÜNAL M., BAGHALIAN A., TASHAKORI S.
The 29'th Florida Conference on Recent Advances in Roboticsand Robot Showcase, MIAMI, United States Of America, 12 - 13 May 2016, pp.254-257
- II. **Loose Bolt Detecting Sensorless SHM System**
TANSEL İ. N., ŞENYÜREK V. Y., ÜNAL M., BAGHALIAN A., TASHAKORI S.
The 29'th Florida Conference on Recent Advances in Roboticsand Robot Showcase, MIAMI, United States Of America, 12 - 13 May 2016, pp.258-261
- III. **Loose Bolt Detection Using Smart Washers**
TANSEL İ. N., ŞENYÜREK V. Y., ÜNAL M., AMIN B., SHERVIN T.
The 29'th Florida Conference on Recent Advances in Roboticsand Robot Showcase, MIAMI, United States Of America, 12 - 13 May 2016, pp.220-224
- IV. **Faults Diagnosis 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 September - 02 October 2013, pp.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 March 2013, vol.169, pp.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 September 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 June 2010, pp.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 June 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, Turkey, 22 - 24 April 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 April 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, Turkey, 20 June 2007, pp.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), Turkey, 1 - 03 June 2005

Metrics

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Citation (WoS): 211

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H-Index (Scopus): 7

Non Academic Experience

Florida International University, Mechanical and Material Engineering, Mechatronics Laboratory