

Prof. HALUK KÜÇÜK

Personal Information

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Biography

Haluk Kucuk received the B.S. degree in Mechanical Engineering and the M.S. degree in Management Engineering from Istanbul Technical University, Istanbul, Turkey, in 1993 and 1995, respectively. He received the M.S. degree in Mechanical Engineering from Bogazici University, Istanbul, in 1995, and the Ph.D. degree in Mechanical Engineering–Engineering Mechanics from Michigan Technological University, USA in 1999.

He is currently a Professor with Faculty of Engineering, Department of Electrical-Electronics Engineering, Marmara University, Istanbul. His research interests are robotics and machine learning.

Education Information

Doctorate, Michigan Technological University, Mühendislik Fakültesi, Makine Mühendisliği, United States Of America 1995 - 1999

Postgraduate, Istanbul Technical University, İşletme Fakültesi, İşletme Mühendisliği Bölümü, Turkey 1993 - 1995

Postgraduate, Bogazici University, Faculty Of Engineering, Makine Mühendisliği (YI) (Tezli), Turkey 1993 - 1995

Undergraduate, Istanbul Technical University, Makine Fakültesi, Makine Mühendisliği Bölümü, Turkey 1989 - 1993

Dissertations

Doctorate, Vision Based Path Planning For Flexible Link Robotics, Michigan Technological University, Makine Mühendisliği, 1999

Postgraduate, A Two dimensional dynamic model simulation of human knee joint, Boğaziçi Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği (YI) (Tezli), 1995

Postgraduate, Otomasyon yönetiminde insan faktörü ve Türk Otomotiv Sektöründe bir uygulama, İstanbul Teknik Üniversitesi, İşletme Fakültesi, İşletme Mühendisliği Bölümü, 1995

Research Areas

Computer Learning, Robotics

Academic Titles / Tasks

Professor, Marmara University, Faculty Of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, 2017 - Continues

Professor, Marmara University, Faculty Of Technology, Mechatronic Engineering, 2013 - 2017

Associate Professor, Marmara University, Faculty Of Technology, Mechatronic Engineering, 2010 - 2013

Associate Professor, Marmara University, Faculty Of Technical Education, Mechatronic Education, 2008 - 2010

Assistant Professor, Marmara University, Faculty Of Technical Education, Mechatronic Education, 2005 - 2008

Assistant Professor, Niğde Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2001 - 2005
Research Assistant, Niğde Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 1994 - 2001

Academic and Administrative Experience

Marmara University, Faculty of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, 2017 - Continues
Marmara University, Faculty of Technology, Mechatronic Engineering, 2011 - 2017
Marmara University, Faculty of Technology, Mechatronic Engineering, 2010 - 2011
Marmara University, Faculty of Technical Education, Mechatronic Education, 2005 - 2006
Niğde Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2003 - 2005
Niğde Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2002 - 2005

Advising Theses

KÜÇÜK H., Driver profiling using long short term memory (lstm) and convolutional neural network (cnn) methods, Postgraduate, A.Cura(Student), 2019
ONAT M., KÜÇÜK H., Sinyal işleme ve genetik-yapay sinir ağları ile rulman arızalarının teşhisi, Doctorate, M.Ünal(Student), 2014
KÜÇÜK H., Düşük ayak hastalığına yönelik elektrik stimulatörü geliştirilmesi, Postgraduate, M.Almbay(Student), 2013
KÜÇÜK H., Görüntü işleme metodu ile robotik beslemeli çok amaçlı multieksen cnc tezgah tasarımı ve uygulaması, Postgraduate, Z.Sezen(Student), 2013
KÜÇÜK H., Tele-robotik haptik bir tutucu sistem tasarımı, Postgraduate, A.Aker(Student), 2011
KÜÇÜK H., Küçük H., Otomobil elektrikli direksiyon sisteminin modellenmesi ve duyarlılık analizi, Postgraduate, Ş.Balcı(Student), 2010
KÜÇÜK H., Doğal atık destekli kompozit malzeme geliştirilmesi, Postgraduate, S.Çelebi(Student), 2010
KÜÇÜK H., Servo kontrollü bir süspansiyon sistemi geliştirilmesi, Postgraduate, E.Aziz(Student), 2010
KÜÇÜK H., Küçük H., Eğitim amaçlı bilgisayar kontrollü dizel motor test ünitesi geliştirilmesi, Postgraduate, A.Mert(Student), 2009
Kuzucuoğlu A. E. , Küçük H., Escherichia coli bakterisinin görüntü işleme teknikleriyle belirlenmesi, Postgraduate, D.Tok(Student), 2009
KÜÇÜK H., Düz tabanlı tedavisinde lateral kolon uzatma için tasarlanmış yeni bir implantın sonlu elemanlar analizi ile biyomekanik değerlendirilmesi, Postgraduate, Ö.Özcan(Student), 2009
KÜÇÜK H., Modüler EIB sisteminin labview ile gerçek zamanlı ve web tabanlı kontrolü, Postgraduate, S.İleri(Student), 2009
KÜÇÜK H., Küçük H., Solunum yetmezliğinde diyafram pacemaker sistemi, Postgraduate, S.Vatansever(Student), 2009
KÜÇÜK H., Diagnosing the cause of the bearing defects by means of signal analysis of online vibro-acoustic records, Postgraduate, S.Tolga(Student), 2008
KÜÇÜK H., Robotik sistemlerde görüntü işleme, Postgraduate, E.Erpolat(Student), 2008
KÜÇÜK H., Endüstriyel çay-yaprak-fiber atıklarının ses yutum özelliklerinin incelenmesi, Postgraduate, S.Ersoy(Student), 2007

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- Driver Profiling Using Long Short Term Memory (LSTM) and Convolutional Neural Network (CNN) Methods**
Cura A., KÜÇÜK H., Ergen E., Oksuzoglu I. B.
IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, vol.22, no.10, pp.6572-6582, 2021 (Journal Indexed in SCI)

- II. **Design, Fabrication and Vision Based Operational Analysis of Novel Shape Memory Alloy Micro Grippers**
Yurtsever Ö., KÜÇÜK H.
International Journal of Precision Engineering and Manufacturing, vol.21, no.9, pp.1697-1716, 2020 (Journal Indexed in SCI)
- III. **Fault Diagnosis of Bevel Gears Using Neural Pattern Recognition and MLP Neural Network Algorithms**
Kelesoglu C., KÜÇÜK H., Demetgul M.
INTERNATIONAL JOURNAL OF PRECISION ENGINEERING AND MANUFACTURING, vol.21, no.5, pp.843-856, 2020 (Journal Indexed in SCI)
- IV. **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 (Journal Indexed in SCI)
- V. **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 (Journal Indexed in SCI)
- VI. **Acoustic Properties of Waste Particle Mixed Polyurethane Composites**
Kucuk H.
CELLULAR POLYMERS, vol.33, no.4, pp.171-188, 2014 (Journal Indexed in SCI)
- VII. **Adaptive on-line parameter identification of a steer-by-wire system**
Cetin A. E., ADLI M. A., EROL BARKANA D., KÜÇÜK H.
MECHATRONICS, vol.22, no.2, pp.152-166, 2012 (Journal Indexed in SCI)
- VIII. **Acoustic Properties of Tea-Leaf Fiber Mixed Polyurethane Composites**
Celebi S., KÜÇÜK H.
CELLULAR POLYMERS, vol.31, no.5, pp.241-255, 2012 (Journal Indexed in SCI)
- IX. **Improving Sound Absorption Property of Polyurethane Foams by Adding Tea-Leaf Fibers**
EKİCİ B., KENTLİ A., KÜÇÜK H.
ARCHIVES OF ACOUSTICS, vol.37, no.4, pp.515-520, 2012 (Journal Indexed in SCI)
- X. **Evaluation of Sound Absorption, Printability, and Some Mechanical Properties of Thin Recycled Cellulosic Sheets Containing Wool, Ceramic Fiber, and Cotton Dust**
Karademir A., YENİDOĞAN S., AYDEMİR C., KÜÇÜK H.
INTERNATIONAL JOURNAL OF POLYMERIC MATERIALS, vol.61, no.5, pp.357-370, 2012 (Journal Indexed in SCI)
- XI. **THERMAL CONDUCTIVITY AND ACOUSTIC PROPERTIES OF NATURAL FIBER MIXED POLYURETHANE COMPOSITES**
BÜYÜKAKINCI B. Y., Sokmen N., KÜÇÜK H.
TEKSTİL VE KONFEKSİYON, vol.21, no.2, pp.124-132, 2011 (Journal Indexed in SCI)
- XII. **Implementation and Development of an Adaptive Steering-Control System**
Cetin A. E., Adli M. A., EROL BARKANA D., KÜÇÜK H.
IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, vol.59, no.1, pp.75-83, 2010 (Journal Indexed in SCI)
- XIII. **Investigation of industrial tea-leaf-fibre waste material for its sound absorption properties**
Ersoy S., Küçük H.
APPLIED ACOUSTICS, vol.70, pp.215-220, 2009 (Journal Indexed in SCI)
- XIV. **Electronic Spectra and High-Resolution B-type Delayed Fluorescence of Salicylidene-m-bromo-aniline in Hexane**
BAYRAKÇEKEN F., KÜÇÜK H.
SPECTROSCOPY LETTERS, vol.42, no.2, pp.87-94, 2009 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **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, 2013 (Refereed Journals of Other Institutions)
- II. **The effect of a new teaching methodology on learning performances of automotive mechatronics students**
ERSOY S., KÜÇÜK H.
Procedia-Social and Behavioral Sciences, vol.2, no.2, pp.310-316, 2010 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **Development of a Dimensions Measurement System Based on Depth Camera for Logistic Applications**
Al Muallim M. T. , KÜÇÜK H., Yılmaz F., Kahraman M.
11th International Conference on Machine Vision (ICMV), Munich, Germany, 1 - 03 November 2018, vol.11041
- II. **Yapay Sinir Ağları ile Araç Sürüş Profilleme**
Cura A., KÜÇÜK H., Ergen E., Öksüzöğlü B.
INTERNATIONAL CONGRESS on ENGINEERING and ARCHITECTURE 14-16 November 2018, Alanya / Turkey , 14 - 16 November 2018, pp.366-375
- III. **Design and Implementation of Multifunctional Gripper and Apparatus, for Robotic-Laparoscopic Surgical and Interventional Radiology**
Yurtsever Ö., KÜÇÜK H.
11th European and Global Summit for Clinical Nanomedicine, Targeted Delivery and Precision Medicine – The Building Blocks to Personalized Medicine, 2 - 05 September 2018, pp.192
- IV. **X-Ray Image Processing for Quantification of Bone Age**
Yiğit A., Akgün E., KÜÇÜK H.
UMAS, International Engineering Research Symposium, 11-13 September 2017, Düzce, Turkey, 11 September 2017
- V. **Design and Production of a Multi-Axis CNC WorkCenter with a Vision Aided Robotic Part Manipulation System**
Zeynep A., KÜÇÜK H.
IATS, 8th International Advanced Technologies Symposium, 19-21 October, 2017, Elazığ, Turkey, 19 October 2017
- VI. **Development of a Novel Monitoring and Control Software for Electronic Device Testing and Analysis Purposes**
Karadeniz Y., KÜÇÜK H.
IATS, 8th International Advanced Technologies Symposium, 19-21 October, 2017, Elazığ, Turkey, 19 October 2017
- VII. **Motion Control of Robot by Using 3D Camera**
Sarıkaya Y., KAPLANOĞLU E., Sansoni G., KÜÇÜK H.
II. INES International Academic Research Congress, 18-21 October 2017, Alanya, Turkey, 18 October 2017
- VIII. **CONTOUR MATCHING AND PLANAR ALIGNMENT USING OPTIMAL TRANSFORMATION PARAMETERS**
KÜÇÜK H., Çetin E., ÖZDEMİR Z.
70th IASTEM International Conference, 19-20 August 2017, Oxford, UK, 19 - 20 August 2017
- IX. **IMU Based Visual Servoing Telerobotic System**
Kocaman M. A. , Erim C., Tıgılı A., Vurgun A., Atak A. S. , KÜÇÜK H.
INESEC International Engineering, Science and Education Conference, Diyarbakır, Turkey, 1 - 03 December 2016, pp.528-534
- X. **Robust and Smooth Colour Tracking by a Tendon Driven Humanoid Neck**
Türkmen H., Öksüzömer N., YİĞİT C. B. , BAYRAKTAR E., KÜÇÜK H., BOYRAZ P.
8th International Conference on Image Processing, Wavelet and Applications, 22 - 24 September 2016
- XI. **A Device to Measure Joint Angles and Foot Force for Lower Extremity Force Distribution Computations**
Onaran E. M. , ERTAŞ G., KÜÇÜK H.

8th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 28 - 30 November 2013, pp.414-417

XII. Artificial Tendon Driving System Using Skin Effect

KAPLANOĞLU E., Ayirga H., KÜÇÜK H.

World Congress on Engineering and Computer Science, San-Francisco, Costa Rica, 23 - 25 October 2013, pp.904-905

XIII. 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

XIV. 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

XV. The effect of a new teaching methodology on learning performances of automotive - mechatronics students

Ersoy S., Küçük H.

2nd World Conference on Educational Sciences (WCES-2010), İstanbul, Turkey, 4 - 08 February 2010, vol.2, pp.310-316

XVI. Image Based Identification of Escherichia coli Bacteria From Its Colony Properties

Tok D., Hacıoğlu H., KÜÇÜK H., KUZUCUOĞLU A. E. , BİRBİR M.

15th International Biomedical Science & Technology Symposium, Güzelyurt, Cyprus (Kktc), 16 - 19 August 2009

XVII. Compliant Control of Steer-by-Wire Systems

Cetin A. E. , Adli M. A. , EROL BARKANA D., KÜÇÜK H.

IEEE/ASME International Conference on Advanced Intelligent Mechatronics, Singapore, Singapore, 14 - 17 July 2009, pp.636-637

XVIII. Sound absorption properties of industrial tea-leaf-fiber waste materials

ERSOY S., KÜÇÜK H.

36th International Congress and Exhibition on Noise Control Engineering, INTER-NOISE 2007, İstanbul, Turkey, 28 - 31 August 2007, vol.7, pp.4336-4344

Supported Projects

Küçük H., Project Supported by Higher Education Institutions, Robotik Laparoskopik Cerrahi ve Girişimsel Radyoloji Alanlarında Kullanılabilecek Multifonksiyonel Robotik Kol Başlıklarının Tasarımı ve Uygulaması, 2017 - 2018

Küçük H., Project Supported by Higher Education Institutions, Konik Dişlilerde Yapay Sinir Ağı Yöntemiyle Arıza Teşhisi, 2015 - 2016

Küçük H., Alınbay M., TUBITAK Project, DFES Düşük Ayak Hastalığı İçin Fonksiyonel Elektrik Stimülatörünün Tasarımı ve Uygulanması, 2012 - 2013

Küçük H., Erol Barkana D., TUBITAK Project, Ortopedik Cerrahi Amaçlı Robotik Sistem, 2008 - 2011

Patent

KÜÇÜK H., Trakeostami Hastaları İçin Bir Konuşma Kapağı, Utility patents, CHAPTER A Human Needs, Standard Registration, 2015

Citations

Total Citations (WOS):460

h-index (WOS):7