

Prof. HAKAN YAVUZ

Personal Information

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Education Information

Doctorate, The University of Lancaster, Engineering Department, Mechatronics Engineering, United Kingdom 1996 - 1999

Post Graduate, University of Lancaster, Engineering Department, Mechatronics Engineering, United Kingdom 1994 - 1995

Under Graduate, Gazi University, Mühendislik Mimarlık Fakültesi, Makina Müh., Turkey 1989 - 1993

Foreign Languages

English, C1 Advanced

Dissertations

Post Graduate, Manyetik retarder sisteminde esnek kontrol uygulaması, Cukurova University, Mühendislik Mimarlık Fakültesi, Makina Müh., 2014

Post Graduate, Bir dizel araç sisteminin modellenmesi ve yapay zeka ile yakıt ekonomisi için kontrollü, Cukurova University, Mühendislik Mimarlık Fakültesi, Makina Müh., 2012

Post Graduate, Aşağı-Yukarı hareketli Dalga Enerjisi Konvertörü Modelleme ve Kontrol Uygulaması (FROG ? Form 2), Cukurova University, Mühendislik Mimarlık Fakültesi, Makina Müh., 2011

Post Graduate, Robotik ekskavatör kazıcı kolu için kontrol ve kumanda sistemi tasarımı ve uygulaması, Mustafa Kemal Üniversitesi, Mühendislik Mimarlık Fakültesi, Makina Müh., 2010

Post Graduate, Zehirli gazları ve aynı zamanda havadaki partikülleri süzen aktif karbonlu filtre malzemesinin imalat süreci ve kullanım alanları, Mustafa Kemal Üniversitesi, Mühendislik Mimarlık Fakültesi, Makina Müh., 2010

Post Graduate, Tek serbestlik dereceli dalga enerjisi konvertörleri ve kontrol uygulamalar, Mustafa Kemal Üniversitesi, Mühendislik Mimarlık Fakültesi, Makina Müh., 2008

Post Graduate, Demir çelik sanayisinde hammaddeden kütük aşamasına kadar üretimin optimizasyonu, Mustafa Kemal Üniversitesi, Mühendislik Mimarlık Fakültesi, Makina Müh., 2003

Post Graduate, Amonyak-Su (NH₃-H₂O) Karşılımlı Absorpsiyonlu (Soğurmalı) Soğutma Sistemleri Ve Termodinamik Analizi, Mustafa Kemal Üniversitesi, Mühendislik Mimarlık Fakültesi, Makina Müh., 2001

Research Areas

Mechanical Engineering, Energy, Fluid Mechanics, Hydrogen Technologies and Fuel Cells , Advanced Energy Technologies, Machine Theory and Dynamics, Machine Dynamics, System Dynamics and Control, Robotics, Mechatronics, Mechanical Vibrations, Aeronautical and Space Engineering, Aeronautical Engineering , Structural Technologies, Aircraft System Technologies, Vehicle Dynamics and Modeling, Aircraft Propulsion Systems, Mechanism and Hydraulic / Fluid Systems, Engineering and Technology

Academic Titles / Tasks

Professor, Cukurova University, Mühendislik Mimarlık Fakültesi, Makina Müh., 2014 - Continues

Associate Professor, Cukurova University, Mühendislik Mimarlık Fakültesi, Makina Müh., 2011 - 2014

Associate Professor, Mustafa Kemal Üniversitesi, Mühendislik Mimarlık Fakültesi, Makina Müh., 2009 - 2011
Assistant Professor, Mustafa Kemal Üniversitesi, Mühendislik Mimarlık Fakültesi, Makina Müh., 2000 - 2009

Advising Theses

YAVUZ H., Flow control around an airfoil with passive flow control devices, Doctorate, E.TÜREN(Student), Continues
YAVUZ H., Modelling and Dynamic Analysis of a Vehicle using MATLAB Simulink, Post Graduate, Ö.Ünsal(Student), Continues
YAVUZ H., Online testing system development for fuel quality control applications, Post Graduate, Ç.ÖZGEÇTÜRK(Student), Continues
YAVUZ H., Control Techniques for Oscillating Wave Energy Converters, Doctorate, A.BURGAÇ(Student), Continues
YAVUZ H., Investigation of the Effect of the Plasma Actuators in Aerodynamic Flow Control Applications, Doctorate, H.AKBİYİK(Student), Continues
YAVUZ H., Additive manufacturing technique and its use in metallic material printing, Doctorate, V.Korkut(Student), Continues
YAVUZ H., Parametric design and development of a transformer system as a design example, Post Graduate, G.KILAGÖZ(Student), Continues
YAVUZ H., Use of Artificial Intelligence in Design of Input Shaper for Motion Control Mechanical Systems, Doctorate, S.BELLER(Student), Continues
YAVUZ H., Design and Control of a Novel Eddy Current Dynamometer, Doctorate, İ.ULUOCAK(Student), Continues

Jury Memberships

Associate Professor Exam, Doçentlik Sınavı, Üniversiteler Arası Kurul, July, 2018
Associate Professor Exam, Doçentlik Sınavı, Üniversiteler Arası Kurul, May, 2017
Associate Professor Exam, Doçentlik Sınavı, Üniversiteler Arası Kurul, July, 2016

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

- **Aerodynamic and energy-efficiency-based assessment of plasma actuator's position on a NACA0015 airfoil**
AKBİYİK H., YAVUZ H., Akansu Y. E.
CONTRIBUTIONS TO PLASMA PHYSICS, vol.60, 2020 (Journal Indexed in SCI)
- **Fuzzy Logic based hybrid type control implementation of a heaving wave energy converter**
BURGAÇ A., YAVUZ H.
ENERGY, vol.170, pp.1202-1214, 2019 (Journal Indexed in SCI)
- **A Study on the Plasma Actuator Electrode Geometry Configurations for Improvement of the Aerodynamic Performance of an Airfoil**
AKBİYİK H., YAVUZ H., Akansu Y. E.
STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.64, pp.719-725, 2018 (Journal Indexed in SCI)
- **Comparison of the Linear and Spanwise-Segmented DBD Plasma Actuators on Flow Control Around a NACA0015 Airfoil**
AKBİYİK H., YAVUZ H., AKANSU Y. E.
IEEE TRANSACTIONS ON PLASMA SCIENCE, vol.45, pp.2913-2921, 2017 (Journal Indexed in SCI)
- **Active control of flow around a circular cylinder by using intermittent DBD plasma actuators**
AKBİYİK H., AKANSU Y. E., YAVUZ H.
FLOW MEASUREMENT AND INSTRUMENTATION, vol.53, pp.215-220, 2017 (Journal Indexed in SCI)
- **A review of command shaping techniques for elimination of residual vibrations in flexible-joint manipulators**
Conker C., YAVUZ H., Bilgic H. H.

JOURNAL OF VIBROENGINEERING, vol.18, pp.2947-2958, 2016 (Journal Indexed in SCI)

- **Quantized control settings based tuning of a heaving wave energy converter in irregular seas**

Mistikoglu S., YAVUZ H.

INTERNATIONAL JOURNAL OF GREEN ENERGY, vol.13, pp.1281-1291, 2016 (Journal Indexed in SCI)

- **An Enhanced Control Technique for the Elimination of Residual Vibrations in Flexible-Joint Manipulators**

Conker C., Kilic A., Mistikoglu S., Kapucu S., YAVUZ H.

STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.60, pp.592-599, 2014 (Journal Indexed in SCI)

- **Hybrid input shaping to suppress residual vibration of flexible systems**

Yavuz H., MISTIKOGLU S., Kapucu S.

JOURNAL OF VIBRATION AND CONTROL, vol.18, pp.132-140, 2012 (Journal Indexed in SCI)

- **Assessment of Transition from Mechanical Engineering to Mechatronics Engineering in Turkey**

Yavuz H., Mistikoglu S.

INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION, vol.25, pp.112-121, 2009 (Journal Indexed in SCI)

Articles Published in Other Journals

- **An intelligent serial connected hybrid control method for gantry cranes**

YAVUZ H., BELLER S.

Mechanical Systems and Signal Processing, vol.146, 2021 (Refereed Journals of Other Institutions)

Books & Book Chapters

- **Mekatronik Mühendisliğine Giriş**

YAVUZ H.

Papatya Yayıncılık, İstanbul, 2018

- **Bölüm 7. Mekanizmalar Modelleme ve Analiz**

YAVUZ H.

in: Mekatronik Mühendisliğine Giriş, Hakan YAVUZ, Editor, Papatya Yayıncılık, İstanbul, pp.225-256, 2018

- **Bölüm 3. Mekatronik Sistemi Oluşturan Elemanlar ve Nitelikleri**

YAVUZ H.

in: Mekatronik Mühendisliğine Giriş, Hakan YAVUZ, Editor, Papatya Yayıncılık, İstanbul, pp.81-118, 2018

- **Bölüm 16. Mekatronik Yaklaşım ile Mühendislik Problemlerinin Analizi**

YAVUZ H.

in: Mekatronik Mühendisliğine Giriş, Hakan YAVUZ, Editor, Papatya Yayıncılık, İstanbul, pp.561-600, 2018

- **Bölüm 1. Mekatronik Mühendisliği Mekatronik Sistemler**

YAVUZ H.

in: Mekatronik Mühendisliğine Giriş, Hakan YAVUZ, Editor, Papatya Yayıncılık, İstanbul, pp.15-40, 2018

- **Bölüm 2. Fonksiyon Esaslı Kavramsal Tasarım**

YAVUZ H.

in: Mekatronik Mühendisliğine Giriş, Hakan YAVUZ, Editor, Papatya Yayıncılık, İstanbul, pp.41-80, 2018

- **Bölüm 10. Algılayıcılar Hareket Üreteçleri**

YAVUZ H.

in: Mekatronik Mühendisliğine Giriş, Hakan YAVUZ, Editor, Papatya Yayıncılık, İstanbul, pp.341-378, 2018

- **Bölüm 15. Makine Teorisi ve Dinamiği**

YAVUZ H.

in: Makine Mühendisliğine Giriş, Necdet GEREN, Editor, Papatya Yayıncılık, İstanbul, pp.629-670, 2017

- **Wave Energy: Available Technologies and R&D Status**

YAVUZ H.

in: Energy Science and Technology Vol. 9: Geothermal and Ocean Energy, Umesh Chandra Sharma, Ram Prasad and Sri Sivakumar, Editor, Studium Press Llc, Texas, pp.420-453, 2015

Refereed Congress / Symposium Publications in Proceedings

- **Design and Setup of A Eddy Current Dynamometer**
ULUOCAK İ., YAVUZ H., TOSUN E.
International Academic Conference on Engineering, Transport, IT and Artificial Intelligence (IAC-ETITAI) 2019, Budapest, Hungary, 23 - 24 August 2019, pp.179-186
- **Active tuning based fuzzy logic control of a heaving wave energy converter in irregular seas**
YAVUZ H., BURGAÇ A., AKBİYK H.
Renewable Energy Sources ? Research and Business (RESRB 2018), Brüksel, Belgium, 18 - 20 June 2018, pp.1
- **The Effects of 3D Flow Structure on the Aerodynamic Forces of an Aircraft Wing**
AKBİYK H., YAVUZ H., BURGAÇ A.
1st International Advanced Researches Engineering Congress, Osmaniye, Turkey, 16 November - 18 June 2017, pp.711
- **Evaluation of a new hybrid tuning technique for optimum operation of heaving type Wave Energy Converters**
BURGAÇ A., YAVUZ H.
1st International Advanced Researches Engineering Congress, Osmaniye, Turkey, 16 November - 18 June 2017, pp.670
- **Recent Status: Wave Energy Conversion and Control Systems**
BURGAÇ A., YAVUZ H.
1st International Advanced Researches Engineering Congress, Osmaniye, Turkey, 16 November - 18 June 2017, pp.667
- **INVESTIGATION OF A NEW CONTROL APPLICATION FOR HEAVING TYPE WAVE ENERGY CONVERTER**
BURGAÇ A., YAVUZ H.
3rd INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2017, İstanbul, Turkey, 19 - 21 December 2017
- **Assesment of Plasma Actuator's Position on Stall Angle for an Airfoil**
AKBİYK H., YAVUZ H., AKANSU Y. E.
10TH INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY AND ENVIRONMENTAL PROTECTION, Bled, Slovenia, 27 - 30 June 2017, pp.1-8
- **Assesment of Plasma Actuator's Position on Stall Angle for an Airfoil**
AKBİYK H., YAVUZ H., AKANSU Y. E.
10TH INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY AND ENVIRONMENTAL PROTECTION, Bled, Slovenia, 27 - 30 June 2017, pp.1-8
- **Assesment of Plasma Actuator's Position on Stall Angle for an Airfoil**
YAVUZ H., AKBİYK H., AKANSU Y. E.
10TH INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY AND ENVIRONMENTAL PROTECTION, Bled, Slovenia, 27 - 30 June 2017, pp.1-8
- **Fuzzy Logic Based Complex System Control Implementation on Wave Energy Converters**
BURGAÇ A., YAVUZ H.
10th International Conference on Sustainable Energy & Environmental Protection, Bled, Slovenia, 27 - 30 June 2017, vol.1, no.1, pp.1-13
- **PROCESSING EFFECTS OF NEWLY DESIGNED TOROIDAL CANS ON TEXTURE AND COLOR QUALITY OF CANNED TUNA**
Tokur B., ERDOĞDU F., AKSUN E. T. , TÜMERKAN T., YAVUZ H.
46th WEFTA CONFERENCE, Split, Croatia, 12 - 14 October 2016, pp.145
- **A NEW INDUSTRIAL DESIGN FOR THE PRODUCTION OF CANNED TUNA: EFFECTS ON LIPID QUALITY AFTER PROCESSING**
Tokur B., ERDOĞDU F., AKSUN E. T. , TÜMERKAN T., YAVUZ H.
46th WEFTA CONFERENCE, Split, Croatia, 12 - 14 October 2016, pp.59
- **PROCESSING EFFECTS OF NEWLY DESIGNED TOROIDAL CANS ON TEXTURE AND COLOR QUALITY OF CANNED TUNA**
Tokur B., ERDOĞDU F., AKSUN E. T. , TÜMERKAN T., YAVUZ H.

46th WEFTA CONFERENCE, Split, Croatia, 12 - 14 October 2016, pp.145

- **Control Techniques for Oscillating Wave Energy Converter**

BURGAÇ A., YAVUZ H.

RENEC 2016, 6. Uluslararası 100 Yenilenebilir Enerji Konferansı, 26 - 28 May 2016, vol.1

- **Investigation of the effect of the plasma actuators vertically placed on the spanwise of NACA0015 airfoil**

AKBIYIK H., YAVUZ H., AKANSU Y. E.

IEEEES, 8th International Exergy, Energy and Environment Symposium, Antalya, Turkey, 1 - 04 May 2016, pp.1-5

- **Elektrikli Araç Uygulamaları için KompozitMalzeme ile Hafif Şase Tasarımı veGeliştirilmesi**

ÖZARSLAN H., YAVUZ H., DARICIK F.

International Conference onMaterial Science and Technology inCappadocia, 6 - 08 April 2016

- **Effect of plasma actuator and splitter plate on drag coefficient of a circular cylinder**

AKBIYIK H., Akansu Y. E. , YAVUZ H., Bay A. E.

10th Anniversary International Conference on Experimental Fluid Mechanics, Prague, Czech Republic, 17 - 20 November 2015, vol.114

- **Paletli Hidrolik Pompalarda Kondüsyon İzleme ve Performans İyileştirme**

Türedi A. T. , YAVUZ H., BİRCAN D. A.

VII. Ulusal Hidrolik Pnömatik Kongresi ve Sergisi, Eskişehir, Turkey, 22 - 25 October 2014, pp.68-74

- **Genişletilmiş Kontrol Aralıklı Manyetik Retarder**

ULUOCAK İ., CONKER Ç., YAVUZ H., AYDIN K.

OTEKON, Bursa, Turkey, 26 - 27 May 2014, pp.217-218

- **Genişletilmiş Kontrol Aralıklı Manyetik Retarder**

ULUOCAK İ., CONKER Ç., YAVUZ H., AYDIN K.

OTEKON, Bursa, Turkey, 26 - 27 May 2014, pp.217-218

- **Comparison of Robust Input Shapers for Elimination of Residual Vibrations**

Conker C., YAVUZ H., KAPUCU S., Baltacıoglu M. K. , Arat H. T. , Burgac A.

2nd International Conference on Mechanical Design and Power Engineering (ICMDPE 2013), Beijing, China, 29 - 30 November 2013, pp.997-998

- **Control application and performance analysis of wave energy converters**

YAVUZ H., SERİN H., Conker C., AYDIN K., ULUOCAK İ.

European Biotechnology Congress, Bratislava, Slovakia, 16 - 18 May 2013, vol.24

- **Performance characteristics of a diesel engine fueled with trio-biodiesel blends**

ÖZCANLI M., SERİN H., YAVUZ H., AYDIN K., TOSUN E.

European Biotechnology Congress, Bratislava, Slovakia, 16 - 18 May 2013, vol.24

Invited Congress and Symposium Activities

3rd Renewable Energy Sources - Research and Business RESRB 2018 conference, Invited Speaker, Brussels, Belgium, 2018

Citations

Total Citations (WOS):41

h-index (WOS):4