

## Assoc. Prof. Hüseyin Ayhan YAVAŞOĞLU

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: HPC-2965-2023

ScopusID: 55670521100

Yoksis Researcher ID: 345203

### Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Control ve Automation Engineering, Turkey 2006 - 2016

Doctorate, University of Maryland, College Park, Department of Electrical and Computer Engineering, Electrical Engineering, United States Of America 2014 - 2015

Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Control and Automation, Turkey 2003 - 2006

Undergraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, Turkey 1998 - 2003

### Research Areas

Solar energy, Vehicle Systems Dynamics, Robotics, Mechatronics

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

- I. **Assessment of Vehicle-Integrated Photovoltaics: A financial and environmental perspective**  
Parlak B. O., Yavaşoğlu H. A.  
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.72, no.104042, pp.1-13, 2024 (SCI-Expanded)
- II. **Enhancing hovercraft energy performance: Adaptive lift fan control for optimal efficiency**  
Rezaei S., Parlak B. O., Yavaşoğlu H. A.  
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.71, pp.1-10, 2024 (SCI-Expanded)
- III. **In-depth analysis of battery life enhancement in solar-assisted fuel-cell range-extender vehicles**  
PARLAK B. O., YAVAŞOĞLU H. A., Ozcan H. G.  
International Journal of Hydrogen Energy, vol.67, pp.1033-1043, 2024 (SCI-Expanded)
- IV. **Co-simulation-based conventional exergy evaluation of a hybrid energy generation-vanadium redox flow battery-air source heat pump system**  
Yesilyurt M. S., Ozcan H. G., YAVAŞOĞLU H. A.  
Energy, vol.281, 2023 (SCI-Expanded)
- V. **Long-Range Wireless Communication for In-Line Inspection Robot: 2.4 km On-Site Test**  
YAVAŞOĞLU H. A., Unal I., Koksoy A., Gokce K., Tetik Y. E.

- Sustainability (Switzerland), vol.15, no.10, 2023 (SCI-Expanded)
- VI. **A novel position determination method for the modular snake-like natural gas pipeline inspection robot in a GPS denied environment**  
Yilmaz M., Yavaşoğlu H. A., Gökce K.  
INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.29, no.3, pp.240-253, 2023 (SCI-Expanded)
- VII. **A Comprehensive Analysis of In-Line Inspection Tools and Technologies for Steel Oil and Gas Pipelines**  
Parlak B. O., Yavaşoğlu H. A.  
Sustainability (Switzerland), vol.15, no.3, 2023 (SCI-Expanded)
- VIII. **An All-Vanadium Redox Flow Battery: A Comprehensive Equivalent Circuit Model**  
Yesilyurt M. S., YAVAŞOĞLU H. A.  
Energies, vol.16, no.4, 2023 (SCI-Expanded)
- IX. **Neural network-based energy management of multi-source (battery/UC/FC) powered electric vehicle**  
Yavasoglu H. A., Tetik Y. E., Ozcan H. G.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.44, no.15, pp.12416-12429, 2020 (SCI-Expanded)
- X. **Implementation of machine learning based real time range estimation method without destination knowledge for BEVs**  
Yavasoglu H. A., Tetik Y. E., Gokce K.  
ENERGY, vol.172, pp.1179-1186, 2019 (SCI-Expanded)
- XI. **Power Split Control Strategy for an EV Powertrain With Two Propulsion Machines**  
Yavasoglu H. A., Shen J., Shi C., Gökaşan M., Khaligh A.  
IEEE TRANSACTIONS ON TRANSPORTATION ELECTRIFICATION, vol.1, no.4, pp.382-390, 2015 (SCI-Expanded)
- XII. **A mobile off-grid platform powered with photovoltaic/wind/battery/fuel cell hybrid power systems**  
Yazici M. S., Yavasoglu H. A., Eroglu M.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.38, no.26, pp.11639-11645, 2013 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Doğal Gaz Boru İçi Denetleme Robotları İçin Enerji Depolama Sistemlerinin Tasarlanması**  
YAVAŞOĞLU H. A.  
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.23, no.1, pp.143-151, 2023 (Peer-Reviewed Journal)
- II. **Comparison of Regression Algorithms to Predict Average Air Temperature**  
PARLAK B. O., YAVAŞOĞLU H. A.  
Uluslararası Mühendislik Araştırma ve Geliştirme Dergisi, vol.15, no.1, pp.312-322, 2023 (Peer-Reviewed Journal)
- III. **Design of a State-Feedback Control System for Sugar Tank Liquid Level Management**  
Parlak B. O., Yavaşoğlu H. A.  
International Journal of Sivas University of Science and Technology, vol.1, no.2, pp.13-34, 2022 (Peer-Reviewed Journal)
- IV. **Fuzzy Decision Based Modeling of Rheostatic Brake System for Autonomous Land Vehicles**  
Sünkün S., Parlak B. O., Yıldırım A., Yavaşoğlu H. A.  
Journal of Computer Science, vol.2022, pp.144-150, 2022 (Conference Book)
- V. **Design of a Toolbox for Kinematic Analysis of Jansen's Linkage**  
Sünkün S., Parlak B. O., Yıldırım A., Yavaşoğlu H. A.  
Journal of Computer Science, vol.2022, pp.112-119, 2022 (Conference Book)
- VI. **Antarktika'da Küresel İklim Değişikliği İzleme için GNSS İstasyon Tasarımı: TUR1 ve TUR2 GNSS İstasyonlarının 4. Ulusal Antarktika Bilim Seferi'nde Antarktika Horseshoe Adası'na Kurulumu**  
SELBESOĞLU M. O., YAVAŞOĞLU H. H., KARABULUT M. F., YAVAŞOĞLU H. A., ÖZCAN H. G., OKTAR Ö., ÖZSOY B., KARAMAN H., KAMAŞAK M. E., GÜLAL V. E.

## Books

- I. **Assembly & C Programming for PIC16F887 Microcontroller**  
Yavaşoğlu H. A., Parlak B. O.  
Yıldız Teknik Üniversitesi Basım Yayın Merkezi, İstanbul, 2023
- II. **Mikroişlemciler ve Programlanması**  
Yavaşoğlu H. A., Parlak B. O.  
Yıldız Teknik Üniversitesi Basım Yayın Merkezi, İstanbul, 2023

## Papers Published in Refereed Scientific Meetings

- I. **Sustainability and Thermodynamic Assessment of Solar-Assisted Electric Vehicle**  
Albazzaz Y., ÖZCAN H. G., YAVAŞOĞLU H. A.  
The 18th SDEWES Conference, Dubrovnik, Croatia, 24 September 2023
- II. **Are Solar-Assisted Electric Vehicles a Rational Investment?**  
Yavaşoğlu H. A., Parlak B. O.  
The 18th SDEWES Conference, Dubrovnik, Croatia, 24 - 29 September 2023
- III. **Design and Analysis of an Energy-Efficient Hovercraft**  
Rezaei S., YAVAŞOĞLU H. A.  
1st International Conference on Frontiers in Academic Research, Konya, Turkey, 18 - 21 February 2023
- IV. **Co-simulation work to assess conventional exergy performance of a hybrid energy generation-redox flow battery system**  
Yeşilyurt M. Ş., ÖZCAN H. G., YAVAŞOĞLU H. A.  
The 17th Paphos SDEWES Conference, Paphos, Cyprus (Gkry), 06 November 2022
- V. **A novel comprehensive equivalent circuit model of an all-vanadium redox flow battery**  
Yeşilyurt M. Ş., YAVAŞOĞLU H. A.  
The 17th Paphos SDEWES Conference, Paphos, Cyprus (Gkry), 06 November 2022
- VI. **A Review on Oil and Gas Pipelines In-Line Inspection Tools and Technologies**  
PARLAK B. O., YAVAŞOĞLU H. A.  
The 3rd LA SDEWES Conference, Sao-Paulo, Brazil, 24 - 28 July 2022
- VII. **Geometric Deformations in Natural Gas Pipelines**  
PARLAK B. O., YAVAŞOĞLU H. A.  
The 3rd LA SDEWES Conference, Sao-Paulo, Brazil, 24 July 2022
- VIII. **Long Range Wireless Communication for Natural Gas Pipeline Inspection Robot**  
YAVAŞOĞLU H. A., ÜNAL İ., Koksoy A., TETİK Y. E., GÖKCE K.  
The 3rd LA SDEWES Conference, Sao-Paulo, Brazil, 24 July 2022
- IX. **Geometric Deformations in Natural Gas Pipelines**  
Parlak B. O., Yavaşoğlu H. A.  
The 3rd LA SDEWES Conference, Sao-Paulo, Brazil, 24 - 28 July 2022
- X. **Doğalgaz Boru Hatlarında kullanılacak Boru İçi Denetleme Robotu İçin Kablosuz Haberleşme Amaçlı Anten Tasarımı**  
peken ş., ÜNAL İ., YAVAŞOĞLU H. A.  
URSI Türkiye Ulusal Komitesi, Kocaeli, Turkey, 7 - 09 September 2021
- XI. **Experimental Study Of Wireless Communication For Natural Gas Pipeline Inspection Robot**  
ÜNAL İ., YAVAŞOĞLU H. A., köksoy a.  
9th GLOBAL CONFERENCE ON GLOBAL WARMING GCGW 2021, Croatia, 1 - 04 August 2021, pp.151-154

- XII. **BİDR: Boru İçi Denetleme Robotu**  
TETİK Y. E., YAVAŞOĞLU H. A., Canbak O., Altunkaya U., GÖKCE K., Sonkaya F., Balaman M. H., Sunan E., Büyükbaskın L. A., Aydın H., et al.  
5. Türkiye Robotbilim Konferansı, İstanbul, Turkey, 26 - 28 June 2019
- XIII. **MULTI-OBJECTIVE MACHINE LEARNING ALGORITHM FOR POWER MANAGEMENT OF HYDROGEN POWERED COMPLEX EV POWERTRAIN STRUCTURE**  
YAVAŞOĞLU H. A., TETİK Y. E., ÖZCAN H. G.  
8th Global Conference on Global Warming (GCGW-2019), Doha, Qatar, 22 - 25 April 2019
- XIV. **Experimental Study of Machine Learning Based Advanced Range Estimation Method for BEVs**  
YAVAŞOĞLU H. A., TETİK Y. E., GÖKCE K.  
3rd SEE SDEWES conference, Novi-Sad, Serbia, 30 June - 04 July 2018
- XV. **Energy storage systems for EVs with two propulsion machines**  
Yavasoglu H. A., Shi C., Gokce K.  
2017 IEEE Transportation and Electrification Conference and Expo, ITEC 2017, Illinois, United States Of America, 22 - 24 June 2017, pp.696-700
- XVI. **A supervisory controller for a hybrid energy storage system with two propulsion machines in electric vehicles**  
YAVAŞOĞLU H. A., shen j., Shi C., Khaligh A.  
2015 Intl Aegean Conference on Electrical Machines & Power Electronics (ACEMP), 2015 Intl Conference on Optimization of Electrical & Electronic Equipment (OPTIM) & 2015 Intl Symposium on Advanced Electromechanical Motion Systems (ELECTROMOTION), Antalya, Turkey, 2 - 04 September 2015
- XVII. **Design of an Automatic Bovine Feeding Machine**  
YAVAŞOĞLU H. A., TENGİZ Y. Z., GÖKŞENLİ A.  
ICAME 2015 : 17th International Conference on Automotive and Mechanical Engineering, Paris, France, 21 - 22 September 2015
- XVIII. **Are Hydrogen Vehicles Still A Rational Investment?**  
Brown J., Gill J., YAVAŞOĞLU H. A.  
2014 Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), Washington, Kiribati, 20 - 22 February 2014

## Supported Projects

Yavaşoğlu H. A., Özcan H. G., TUBİTAK Project, Kutup Şartlarına Uyumlu Enerji Depolama Sistemi Geliştirilmesi, 2023 - 2024

## Peer Reviews in Scientific Publications

JOURNAL OF ENERGY ENGINEERING - ASCE, National Scientific Refreed Journal, June 2022

Journal of Sustainable Development of Energy, Water and Environment Systems, Journal Indexed in ESCI, March 2022

IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, SCI Journal, August 2017

IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, SCI Journal, March 2015

## Scientific Consultations

TÜBİTAK RUTE, Scientific Consultancy, Yıldız Technical University, Turkey, 2021 - Continues

## Tasks In Event Organizations

Yavařođlu H. A., 17th SDEWES Conference, Paphos, S. Cyprus, 2022, Scientific Congress, Pafos, Cyprus (Gkry), Kasım 2022

Yavařođlu H. A., 3rd LA SDEWES Conference, Sao-Paulo, Brasil, 2022 , Scientific Congress, Sao-Paulo, Brazil, Temmuz 2022

Yavařođlu H. A., IEEE APEC, Scientific Congress, Texas, United States Of America, Mart 2014

## **Metrics**

Publication: 39

Citation (WoS): 217

Citation (Scopus): 267

H-Index (WoS): 6

H-Index (Scopus): 6

## **Awards**

Peken Ő., Őnal İ., Yavařođlu H. A., En iyi ođrenci makalesi, Ieee & Ursı Ap/Mtt/Emc/Ed Konferansı, September 2021

Yavařođlu H. A., Best Paper Award, Sdewes Konferansı, July 2018

## **Non Academic Experience**

TŪBİTAK RUTE, Bařuzman Arařtırmacı

TŪBİTAK MAM, Uzman Arařtırmacı

University of Maryland, Doktora Sırası Arařtırma

Birleřmiř milletler Sınai Kalkınma ŐrgŪtŪ - Hidrojen Teknolojileri Arařtırma Merkezi, Proje MŪhendisi

Tuncsemi, Uygulama MŪhendisi