

Asst. Prof. Mehmet İŞCAN

Personal Information

Email: miscan@yildiz.edu.tr

Web: <https://avesis.yildiz.edu.tr/miscan>

International Researcher IDs

ORCID: 0000-0003-2261-8218

Yoksis Researcher ID: 231413

Education Information

Doctorate, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, Turkey 2016 - 2023

Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Mekatronik Mühendisliği, Turkey 2013 - 2016

Undergraduate, Yildiz Technical University, Makina Fakültesi, Mekatronik Mühendisliği, Turkey 2009 - 2013

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Postgraduate, A NEW METHOD FOR QT INTERVAL ANALYSIS OF ECG SIGNALS BASED ON GAUSSIAN MIXTURE MODEL AND NEURAL NETWORK, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Mekatronik Mühendisliği, 2016

Research Areas

Computer Sciences, Artificial Intelligence, Computer Learning and Pattern Recognition, Neural Networks, Biomedical Engineering, Biosignal Processing, Biosignal Processing, Mechanical Engineering, Machine Theory and Dynamics, Mechatronics, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, 2024 - Continues

Research Assistant PhD, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, 2023 - 2024

Research Assistant, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, 2014 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **An intelligent aortic valve model for complete cardiac cycle**
İŞCAN M., YEŞİLDİREK A.
International Journal for Numerical Methods in Biomedical Engineering, 2024 (SCI-Expanded)
- II. **Adaptive elliptic trajectory-based received signal strength indicator antenna tracking algorithm**
Taş A. İ., İscan M., Gurkan B., Yilmaz C.
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, no.01423312231213677, 2023 (SCI-Expanded)
- III. **Novel aortic heart valve model parameterizing normal and pathological cases: Aortic stenosis and regurgitation**
İşcan M., Yeşildirek A.
Transactions of the Institute of Measurement and Control, vol.45, no.15, pp.2997-3010, 2023 (SCI-Expanded)
- IV. **A New Cardiovascular Mock Loop Driven by Novel Active Capacitance in Normal and Abnormal Conditions**
İşcan M., Yesildirek A.
APPLIED BIONICS AND BIOMECHANICS, pp.1-20, 2023 (SCI-Expanded)
- V. **A novel elliptic trajectory formula for active RSSI-based antenna tracking algorithm**
İşcan M., Taş A. İ., Gürkan B., Yılmaz C.
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, vol.45, no.14, pp.2760-2770, 2023 (SCI-Expanded)
- VI. **Modelling Transient Cardiovascular Hemodynamics with Physiological Conscious Autoencoder**
İscan M., Yeşildirek A.
IEEE ACCESS, vol.10, no.1, pp.1-8, 2023 (SCI-Expanded)
- VII. **A Fully Automatic Novel Method to Determine QT Interval Based on Continuous Wavelet Transform**
Yılmaz C., İşcan M., Yılmaz A.
ELECTRICA, vol.17, no.1, pp.3093-3099, 2017 (SCI-Expanded)

Articles Published in Other Journals

- I. **DISCRETE TIME-BASED FEEDBACK LINEARIZATION CONTROLLER APPROACH FOR ROBOT MANIPULATOR**
Vural B., Taş A. İ., Özden A. B., Aydın M., İşcan M., Yılmaz C.
F.Ü. Uzay ve Savunma Teknolojileri Dergisi, vol.1, no.1, pp.180-185, 2022 (Peer-Reviewed Journal)
- II. **ANTENNA TRACKER DESIGN WITH A DISCRETE LYAPUNOV STABILITY BASED CONTROLLER FOR MINI UNMANNED AERIAL VEHICLES**
İŞCAN M., TAŞ A. İ., Vural B., Özden A. B., YILMAZ C.
International Journal of Multidisciplinary Studies and Innovative Technologies, vol.6, no.1, pp.77-85, 2022 (Peer-Reviewed Journal)
- III. **A Novel QT Interval Analysis Method Based On Continuous Wavelet Transform and Philips Algorithm**
İŞCAN M., YILMAZ A., Vural B., YILMAZ C., TUZCU V.
Journal of Engineering and Science in Medical Diagnostics and Therapy, vol.5, no.1, pp.1-7, 2022 (Peer-Reviewed Journal)
- IV. **Modeling and Simulation of a Lower Limb Exoskeleton System with Pathologic Cases**
İŞCAN M., YILMAZ C., Vural B., Eken H.
ASME Journal of Engineering and Science in Medical Diagnostics and Therapy, 2022 (Peer-Reviewed Journal)
- V. **GERİ DÖNÜŞÜMLÜ YAPAY SİNİR AĞI TABANLI T DALGASI SONU TESPİTİ**
İŞCAN M., YEŞİLDİREK A.
ENGINEERING SCIENCES, 2020 (Peer-Reviewed Journal)
- VI. **QT Zaman Aralığının Gauss Karışım Modeli ve Yapay Sinir Ağı Tabanlı Tespiti**
İŞCAN M., YILMAZ C.
Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.6, pp.752-762, 2017 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **İleri Robotik - Ortaokul**
Yılmaz C., Aktan M. E., Ömürlü V. E., İşcan M.
TÜBİTAK Yayınları, İstanbul, 2024
- II. **İleri Robotik - Lise**
Yılmaz C., Aktan M. E., Ömürlü V. E., İşcan M.
TÜBİTAK Yayınları, İstanbul, 2024

Refereed Congress / Symposium Publications in Proceedings

- I. **Dört Pervaneli İnsansız Hava Araçlarında PID Kazanç Optimizasyonu**
İşcan M.
Uluslararası Bilimsel Alanlarda Yenilikler Sempozyumu , Antalya, Turkey, 7 - 08 June 2024, pp.1-6
- II. **Real Time Discrete Control Algorithm for Gimbal System Design in Mini Unmanned Aerial Vehicles**
Taş A. İ., İşcan M., Özden A. B., Çınar E., Vural B., Yılmaz C.
4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, Ankara, Turkey, 09 June 2022
- III. **ANTENNA TRACKER DESIGN WITH A DISCRETE LYAPUNOV STABILITY BASED CONTROLLER FOR MINI UNMANNED AERIAL VEHICLES**
İŞCAN M., Taş A. İ., Vural B., Özden A. B., YILMAZ C.
4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, Ankara, Turkey, 09 June 2022
- IV. **Lyapunov Control Method Based Optimal Control of Alpha-Type Stirling Motor**
Azanpa M., Vural B., Taş A. İ., Özden A. B., İşcan M.
4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, Ankara, Turkey, 09 June 2022
- V. **MODIFIED BETA TYPE STIRLING MOTOR CONTROL BASED ON LYAPUNOV THEORY**
KOYUN A., İŞCAN M., AZANPA M.
5TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2019, İstanbul, Turkey, 17 - 19 December 2019
- VI. **MODELLING AND CONTROL OF HIGH PRECISION POSITIONING SYSTEM WITH ELECTROMAGNETIC ACTUATOR**
KOYUN A., Kurt R., İŞCAN M.
5TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL 2019, İstanbul, Turkey, 17 December 2019 - 19 July 2020
- VII. **DESIGN AND CONTROL OF AN EXOSKELETON ROBOT: A MATLAB SIMSCAPE APPLICATION**
İŞCAN M., Vural B., Eken H., YILMAZ C.
4TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING: ICAME 2018, İstanbul, Turkey, 19 December 2018, pp.1
- VIII. **Design and Control Strategy of Different Scanning Calorimetry**
İŞCAN M., KURT R., KOYUN A.
4TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING ISTANBUL, 19 - 21 December 2018
- IX. **Hand gesture movement classification based on dynamically structured neural network**
İŞCAN M., emeç c., YEŞİLDİREK A.
2018 Electric Electronics, Computer Science, Biomedical Engineerings'xx Meeting (EBBT), İstanbul, Turkey, 18 - 19 April 2018
- X. **Bir Üst Uzun Rehabilitasyon Robotu Kullanarak EMG Sinyalleriyle Yapay Sinir Ağları Tabanlı Empedans Tahmini**

Güney Ö. F., İşcan M., Akdoğan E.

Otomatik Kontrol Ulusal Toplantısı, TOK 2017, İstanbul, Turkey, 21 September - 23 December 2017, vol.1, pp.484-489

- XI. **Gradient descent based classification of road induced disturbances for active suspension systems**
Aktif Söspansiyon Sistemleri için Yol Kaynaklı Bozucuların Gradyan İniş Tabanlı Sınıflandırılması
İŞCAN M., Sever M.
2017 Electric Electronics, Computer Science, Biomedical Engineerings' Meeting, EBBT 2017, İstanbul, Turkey, 20 - 21 April 2017
- XII. **Optimization of the heart pump geometry based on multiple gradient descent algorithm**
Kalp pompası geometrik optimizasyonunun çoklu gradyan algoritması tabanında modellenmesi
İŞCAN M., Kadipasaoglu K.
2017 Electric Electronics, Computer Science, Biomedical Engineerings' Meeting, EBBT 2017, İstanbul, Turkey, 20 - 21 April 2017
- XIII. **ROTOR and DIFFUSER OPTIMIZATION of a NOVEL AXIAL FLOW LEFTVENTRICULAR ASSIST DEVICE**
İŞCAN M., KADIPAŞAOĞLU A. K.
The 3rd International Conference on Engineering and Natural Sciences(ICENS), Budapest, Hungary, 3 - 07 May 2017, pp.1
- XIV. **Multilead QT Interval Analysis Algorithm Based on Continuous Wavelet Transform**
İŞCAN M., SARIOZKAN S., Yilmaz A., YILMAZ C.
4th International Conference on Electrical and Electronic Engineering (ICEEE), Ankara, Turkey, 8 - 10 April 2017, pp.318-322
- XV. **QT Zaman Aralığı Analizi İçin Sürekli Dalgacık Dönüşümü Ve Philips Metodu Tabanlı Özgün Bir Algoritma**
İŞCAN M., YILMAZ A., YILMAZ C.
ELECO 2016, Antalya, Turkey, 1 - 03 December 2016
- XVI. **A Novel Algorithm Combining Continuous Wavelet Transform and Philips Method For QT Interval Analysis**
İŞCAN M., YILMAZ A., YILMAZ C.
Elektrik - Elektronik ve Biyomedikal Mühendisliği Konferansı, 01 December 2016
- XVII. **Yapay Zeka Tabanında Otomatik QT zaman aralığı Ölçümü**
İŞCAN M., YILMAZ C., YİĞİT F.
TIPTEKNO'16 TIP TEKNOLOJİLERİ KONGRESİ, Antalya, Turkey, 27 - 29 October 2016
- XVIII. **Automatic QT interval Measurement Based on Neural Networks**
İŞCAN M., YILMAZ C., YİĞİT F.
TIPTEKNO'16 Tıp Teknolojileri Kongresi, Antalya, Turkey, 27 October 2016, pp.94-97
- XIX. **A Fully Automatic Novel Method to Determine QT Interval Based on Continuous Wavelet Transform**
YILMAZ A., İŞCAN M., YILMAZ C.
TIPTEKNO'2016 Tıp Teknolojileri Kongresi, Antalya, Turkey, 27 - 29 October 2016, vol.17, pp.3093-3099
- XX. **Heartbeat pattern classification algorithm based on Gaussian mixture model**
İŞCAN M., YİĞİT F., YILMAZ C.
11th IEEE International Symposium on Medical Measurements and Applications, MeMeA 2016, Benevento, Italy, 15 - 18 May 2016
- XXI. **Gauss Karışım Modeli Tabanında T Dalgası Sonu Sınıflaması**
İŞCAN M., YİĞİT F., YILMAZ C.
24. Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SİU2016), Zonguldak, Turkey, 16 May 2016, pp.1
- XXII. **Gauss Karışım Modeli Tabanında Aritmik ve Aritmik olmayan Kalp Atımı Sınıflaması**
İŞCAN M., YILMAZ C., YİĞİT F.
2016 Electric Electronics, Computer Science, Biomedical Engineerings' Meeting (EBBT), İstanbul, Turkey, 26 April 2016, pp.1-4
- XXIII. **Arrhythmic and Non Arrhythmic Heartbeat Classification based on Gaussian Mixture Model**
İŞCAN M., YILMAZ C., YİĞİT F.

2016 Electric Electronics, Computer Science, Biomedical Engineerings' Meeting (EBBT), İstanbul, Turkey, 26 - 27 April 2016

XXIV. T-Wave End Pattern Classification Based on Gaussian Mixture Model

İŞCAN M., Yigit F., YILMAZ C.

24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1953-1956

Supported Projects

İŞCAN M., Project Supported by Other Official Institutions, T Dalga Alternansı Sınıflaması Yapabilen Taşınabilir Bir Kaydedici Tasarımı ve Yazılım Uygulaması, 2015 - 2016

İŞCAN M., Other International Funding Programs, Lazer Vakum Kaplama Cihaz Tasarımı, 2012 - 2013

Metrics

Publication: 39

Citation (WoS): 3

Citation (Scopus): 10

H-Index (WoS): 1

H-Index (Scopus): 2

Awards

İŞCAN M., TÜBİTAK 2241-B Sanayi Odaklı Bitirme Projeleri, TÜBİTAK 2241-B Sanayi Odaklı Bitirme Projeleri, July 2013

Non Academic Experience

PHINITE MÜHENDİSLİK VE TEKNOLOJİ SAN. TİC. LTD. ŞTİ.

Business Establishment Private, Pulse&More Corporation

PULSE AND MORE ARGE VE DANIŞMANLIK LTD ŞTİ

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