Asst. Prof. Bahadır ÇATALBAŞ

Personal Information

Office Phone: +90 212 383 5950

Email: bahadir.catalbas@yildiz.edu.tr

Web: https://avesis.yildiz.edu.tr/17390

International Researcher IDs

ScholarID: ZBqiT74AAAAJ

ORCID: 0000-0002-8684-5754

Publons / Web Of Science ResearcherID: ABH-0379-2022

ScopusID: 56247072200

Yoksis Researcher ID: 387096

Education Information

Doctorate, Ihsan Dogramaci Bilkent University, Graduate School of Engineering and Science, Department of Electrical and Electronics Engineering, Turkey 2015 - 2022

Postgraduate, Ihsan Dogramaci Bilkent University, Graduate School of Engineering and Science, Department of Electrical and Electronics Engineering, Turkey 2013 - 2015

Undergraduate, Ihsan Dogramaci Bilkent University, Engineering Faculty, Department of Electrical and Electronics Engineering, Turkey 2008 - 2013

Research Areas

Control and System Engineering, Humanoid Robots, Artificial Intelligence, Computer Learning and Pattern Recognition

Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Control And Automation Engineering, 2023 - Continues

Courses

Undergraduate

KOM2722 Numerical Analysis, Undergraduate, 2022 - 2023

KOM3722 Microcontroller And Industrial Applications 1, Undergraduate, 2022 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Two-Legged Robot Motion Control With Recurrent Neural Networks**
Çatalbaş B., Morgül Ö.
Journal of Intelligent and Robotic Systems: Theory and Applications, vol.104, no.4, 2022 (SCI-Expanded)

II. **A low-cost feedback control systems laboratory setup via Arduino–Simulink interface**

Uyanik I., ÇATALBAŞ B.

Computer Applications in Engineering Education, vol.26, no.3, pp.718-726, 2018 (SCI-Expanded)

Articles Published in Other Journals

I. **A Low-cost Laboratory Experiment Setup for Frequency Domain Analysis for a Feedback Control Systems Course**
ÇATALBAŞ B., Uyanık İ.
IFAC-PapersOnLine, vol.50, no.1, pp.15704-15709, 2017 (Scopus)

Papers Published in Refereed Scientific Meetings

I. **Development of Object Detection Models Compatible with Edge TPU Accelerator for Low-Cost Single-Board Computers**
Yilmaz A., Uzunçayir I. E., Çatalbaş B.
ELECO 2024, Elektrik-Elektronik ve Biyomedikal Mühendisliği Konferansı, Bursa, Turkey, 28 - 30 November 2024, pp.1-5

II. **İki Bacaklı Robot Hareket Kontrolünde Yapay Sinir Ağlarının Kullanımı / The Use of Artificial Neural Networks in Bipedal Robot Motion Control**
ÇATALBAŞ B., ÇATALBAŞ B., MORGÜL Ö.
24. Otomatik Kontrol Ulusal Toplantısı TOK 2023, İstanbul, Turkey, 14 - 16 September 2023

III. **Identification and Control of a Linear Time-Periodic Test Bench Using Harmonic Transfer Functions and LQR Controllers**
Sert B., Çatalbaş B., Uyanik I.
2023 9th International Conference on Control, Decision and Information Technologies (CoDIT), Rome, Italy, 03 July 2023, pp.2366-2371

IV. **Tracking the Nodal Point of Weakly Electric Fish Using Artificial Neural Networks Zayif Elektrik Baliklarinin Düğüm Noktasinin Yapay Sinir Ağlari Kullanilarak Takip Edilmesi**
Çatalbaş B., Elikuru D., Aydin E. Y., Uyanık İ.
31st IEEE Conference on Signal Processing and Communications Applications, SIU 2023, İstanbul, Turkey, 5 - 08 July 2023

V. **Zayıf elektrik balıklarında derin öğrenme kullanımıyla anal yüzgeç ve düğüm noktası takibi**
ELİKURU M. D., AYDIN E. Y., GÜRLER N., ÇATALBAŞ B., UYANIK İ.
20. ULUSAL SİNİRBİLİM KONGRESİ, İstanbul, Turkey, 19 - 23 October 2022

VI. **Two-Legged Robot System Identication with Articial Neural Networks Yapay Sinir Aglari Ile Iki Ayakli Robot Sistem Tanilamasi**
Çatalbaş B., Catalbas B., Morgul O.
28th Signal Processing and Communications Applications Conference, SIU 2020, Gaziantep, Turkey, 5 - 07 October 2020

VII. **Tekrarlayan Sinir Ağları ile İki Ayaklı Robot Hareket Kontrolü / Two-Legged Robot Motion Control With Recurrent Neural Networks**
ÇATALBAŞ B., MORGÜL Ö.
Otomatik Kontrol Ulusal Toplantısı TOK 2019, Muğla, Turkey, 11 - 14 September 2019

VIII. **A new initialization method for artificial neural networks: Laplacian Yapay sinir ağlarinda yeni bir ön değer atama yöntemi: Laplasyen**
Çatalbas B., Çatalbaş B., Morgul Ö.
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4

IX. **Human activity recognition with different artificial neural network based classifiers Farkli Yapay**

Sinir Aği Temelli Siniflandiricilar ile İnsan Hareketi Tanimlama
Catalbas B., Çatalbaş B., Morgul O.
25th Signal Processing and Communications Applications Conference, SIU 2017, Antalya, Turkey, 15 - 18 May 2017

X. **A comparative study of classification methods for fall detection Düşme tespiti için siniflandirma yöntemlerinin karşilaştirilmasi**
Çatalbaş B., Yucesoy B., Secer G., Aslan M.
2014 22nd Signal Processing and Communications Applications Conference, SIU 2014, Trabzon, Turkey, 23 - 25 April 2014, pp.1315-1318

Supported Projects

Çatalbaş B., TUBITAK Project, Discovery of Motion Principles of Rover Robots on Sloping and Granular Terrain and Optimization of Locomotion by Machine Learning, 2024 - 2025

Çatalbaş B., Uyanık İ., TUBITAK Project, Identification of Behavioral and Neural Expressions of Sensorimotor Controller via Machine Learning Techniques, 2022 - 2023

TUBITAK Project, Artificial Neural Network Based Controller Design and Implementation for Two-Legged Robots, 2020 - 2023