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Education Information

Doctorate, Anadolu University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering (English), Turkey 1998 - 2005

Postgraduate, Anadolu University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering (English), Turkey 1994 - 1998

Undergraduate, Anadolu University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering (English), Turkey 1990 - 1994

Foreign Languages

English, C1 Advanced

Research Areas

Electrical and Electronics Engineering, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Kocaeli University, Mühendislik Fakültesi, Elektronik ve Haberleşme Mühendisliği, 2013 - Continues

Assistant Professor, Yıldız Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2005 - 2013

Research Assistant, Anadolu University, Faculty Of Engineering-Architecture, Department Of Electrical And Electronic Engineering, 1994 - 2005

Advising Theses

Ayyıldız B., Seri hibrit elektrikli araçların modellenmesi ve kontrolü, Postgraduate, A.ÖNDER(Student), 2009

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Robust Trajectory Tracking Control for Serial Robotic Manipulators Using Fractional Order-Based PTID Controller**
Ataşlar-Ayyıldız B.
FRACTAL AND FRACTIONAL, vol.7, no.3, pp.1-23, 2023 (SCI-Expanded)
- II. **Control and Robust Stabilization at Unstable Equilibrium by Fractional Controller for Magnetic Levitation Systems**
Ataşlar-Ayyıldız B., Karahan O., Yılmaz S.
FRACTAL AND FRACTIONAL, vol.5, no.3, 2021 (SCI-Expanded)
- III. **Robust flow control in data-communication networks with multiple time-delays**
Unal H, U., Ataslar-Ayyildiz B., Iftar A., Ozbay H.
INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL, vol.20, no.13, pp.1529-1548, 2010 (SCI-Expanded)
- IV. **Rate-based flow controllers for communication networks in the presence of uncertain time-varying multiple time-delays**
Quet P., Ataslar B., Iftar A., Ozbay H., Kalyanaraman S., Kang T.
AUTOMATICA, vol.38, no.6, pp.917-928, 2002 (SCI-Expanded)
- V. **Decentralized routing controller design using overlapping decompositions**
Ataslar B., Iftar A.
INTERNATIONAL JOURNAL OF CONTROL, vol.72, no.13, pp.1175-1192, 1999 (SCI-Expanded)

Articles Published in Other Journals

- I. **CONTROLLER TUNING APPROACH WITH TLBO ALGORITHM FOR THE AUTOMATIC VOLTAGE REGULATOR SYSTEM**
Ayyıldız B., Karahan O.
Eskişehir Technical University Journal of Science and Technology A - Applied Sciences and Engineering, vol.21, no.1, pp.128-146, 2020 (Peer-Reviewed Journal)
- II. **Design of a MAGLEV System with PID Based Fuzzy Control Using CS Algorithm**
Ataşlar-Ayyıldız B., Karahan O.
CYBERNETICS AND INFORMATION TECHNOLOGIES, vol.20, no.5, pp.5-19, 2020 (ESCI)
- III. **APPLICATION OF MULTI-OBJECTIVE CONTROLLER TO OPTIMAL TUNING OF PID PARAMETERS FOR DIFFERENT PROCESS SYSTEMS USING CUCKOO SEARCH ALGORITHM**
Karahan O., Ayyıldız B.
Anadolu University Journal of Science and Technology-A Applied Sciences and Engineering, vol.20, pp.1-16, 2019 (Peer-Reviewed Journal)
- IV. **Birden fazla zaman gecikmesine sahip veri iletişim ağlarında akış kontrolü için μ kontrolör tasarımı**
AYYILDIZ B.
Anadolu Üniversitesi Bilim ve Teknoloji Dergisi, 2004 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Optimized PID Based Controllers for Improving Transient and Steady State Response of Maglev System**
Karahan O., Ayyıldız B.
in: Advances in Engineering Research, Victoria M. Petrova, Editor, Nova Science Publishers, New-York, pp.149-185, 2020

Refereed Congress / Symposium Publications in Proceedings

- I. **Metro Hatlarında SCADA ile Acil Durum Senaryoları ve Tahliye Simülasyonu**
Çekerek E., Ayyıldız B.
International Marmara Sciences Congress, Kocaeli, Turkey, 9 - 10 June 2023, pp.411-419
- II. **Vinç Sistemlerinin Optimal Kontrolü**
Cogay S., Ayyıldız B.
International Marmara Sciences Congress, Kocaeli, Turkey, 9 - 10 December 2022, pp.184-189
- III. **Optimal Tuning of PID Parameters for Magnetic Ball Levitation System Using Multi-objective Evolutionary Algorithms**
Kıranel G. M., Ayyıldız B.
2021 5th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Ankara, Turkey, 21 - 23 October 2021, pp.340-345
- IV. **Elektrikli ve Kademesiz Araç Kapı Gergi Kolu Tasarımı ve PID Kontrolü**
Cogay S., Ayyıldız B.
ASYU 2021, Elazığ, Turkey, 6 - 08 October 2021, pp.1-6
- V. **Robust Control of Inverted Pendulum System Using μ -Synthesis Approach**
KANLIKAYA Ö., AYYILDIZ B.
Proceedings of 10th International Symposium on Intelligent Manufacturing and Service Systems, 9 - 11 September 2019
- VI. **Design and Control of the Two-wheeled Self-Balancing Robot Using Microcontroller**
Özcan B. C., Karahan O., Ayyıldız B.
Proceedings of 10th International Symposium on Intelligent Manufacturing and Service Systems, Sakarya, Turkey, 9 - 11 September 2019, pp.897-904
- VII. **Trajectory Tracking for The Magnetic Ball Levitation System via Fuzzy PID Control Based on CS Algorithm**
AYYILDIZ B., KARAHAN O.
International Symposium on INnovations in Intelligent SyTems and Applications, INISTA 2019, 3 - 05 July 2019
- VIII. **Optimal Design of Fuzzy PID Controller with CS Algorithm for Trajectory Tracking Control**
Karahana O., Ayyıldız B.
Science and Information Conference SAI 2018: Intelligent Computing, London, United Kingdom, 10 - 12 July 2018, vol.858, pp.174-188
- IX. **Tuning of Fractional Order PID Controller using CS Algorithm for Trajectory Tracking Control**
Ayyıldız B., Karahan O.
6th International Conference on Control Engineering Information Technology - CEIT 2018, İstanbul, Turkey, 25 - 27 October 2018, pp.251-256
- X. **Parçacık Sürüsü Optimizasyonu Kullanılarak Ters Sarkaç Sisteminin Kesir Dereceli PID ile Kontrolü**
AYYILDIZ B.
Akıllı Sistemler Dergisi, Akıllı Sistemlerde Yenilikler ve Uygulamaları (ASYU-2017), Turkey, 5 - 07 October 2017
- XI. **Kalman Filtresi İle PID Denetleyicinin Yüz Takibi Sistemine Uygulanması**
KARAHAN O., AYYILDIZ B.
OTOMATİK KONTROL ULUSAL TOPLANTISI, Turkey, 21 - 23 September 2017
- XII. **Parçacık Sürüsü Optimizasyonu Kullanılarak Dönel Ters Sarkaç Sisteminin Bulanık Mantık Tabanlı PID Kontrolü**
KARAHAN O., AYYILDIZ B.
OTOMATİK KONTROL ULUSAL TOPLANTISI, Turkey, 21 - 23 September 2017
- XIII. **Çoklu zaman gecikmeli veri iletişim ağları için gürbüz denetleyici tasarımı**
ÜNAL H. U., AYYILDIZ B., İFTAR A., ÖZBAY H.
Otomatik Kontrol Ulusal Toplantısı Bildirileri (TOK'06), Turkey, 6 - 08 October 2006
- XIV. **Robust controller design for multiple time-delay systems: The case of data-communication networks**
ÜNAL H. U., AYYILDIZ B., İFTAR A., ÖZBAY H.
17th International Symposium on Mathematical Theory of Networks and Systems, 24 - 28 July 2006
- XV. **Robust rate-based flow controllers for high-speed networks: The case of uncertain time-varying**

multiple time-delays

AYYILDIZ B., İFTAR A., ÖZBAY H.

American Control Conference, 28 - 30 June 2001

- XVI. **Comparison of H_∞ and μ -synthesis based flow controllers for high-speed networks with multiple time-delays**

AYYILDIZ B.

American Control Conference, 25 - 27 June 2001

- XVII. **A decentralized control approach for transportation Networks**

AYYILDIZ B., İFTAR A.

8th IFAC Symposium on Large Scale Systems, 15 - 18 June 1998

- XVIII. **Ulaşım ağları için bir dış merkezli yönlendirme kontrolü algoritması**

AYYILDIZ B., İFTAR A.

7. Ulusal Elektrik-Elektronik-Bilgisayar Mühendisliği, Turkey, 31 August - 02 September 1997

- XIX. **Decentralized routing controller design for networks with more than two overlapping subnetworks**

AYYILDIZ B., İFTAR A.

IEEE International Conference on Systems, Man, and Cybernetics, 22 - 25 October 1995

- XX. **İkiden fazla altağa sahip bilgisayar ağlarında yönlendirme kontrolü simülasyon programı**

AYYILDIZ B., İFTAR A.

6. Ulusal Elektrik Mühendisliği Konferansı, Turkey, 11 - 17 September 1995

Metrics

Publication: 30

Citation (WoS): 126

Citation (Scopus): 199

H-Index (WoS): 5

H-Index (Scopus): 6

Scholarships

TÜBİTAK Münir Bırsel Vakfı Bursu, TÜBİTAK, 2001 - 2001