

Asst. Prof. SERHAT OBUZ

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International Researcher IDs

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Education Information

Doctorate, University of Florida, United States Of America 2012 - 2016

Undergraduate, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 2003 - 2007

Dissertations

Doctorate, Unknown Time-Varying Input Delay Compensation for Uncertain Nonlinear Systems, University of Florida, Engineering, Mechanical, 2016

Research Areas

Rehabilitation, Renewable energy, System Dynamics and Control, Robotics, Mechatronics

Academic Titles / Tasks

Research Assistant, Eskisehir Osmangazi University, Mühendislik-Mimarlık Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2017 - Continues

Research Assistant, University of Florida, Mechanical And Aerospace Engineering, 2012 - 2016

Courses

Electrical Engineering Design, Undergraduate, 2020 - 2021, 2018 - 2019

Uzmanlık Alan Dersi, Postgraduate, 2020 - 2021

Electrical Engineering Design, Undergraduate, 2020 - 2021, 2018 - 2019

Control Systems Lab, Undergraduate, 2019 - 2020

Control Systems Lab, Undergraduate, 2019 - 2020, 2018 - 2019

Linear Systems Theory, Doctorate, 2020 - 2021, 2019 - 2020

Design Processes, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019

Fundamentals of Control Systems, Undergraduate, 2018 - 2019

Linear Control Systems, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018

Linear Control Systems, Undergraduate, 2019 - 2020

Introduction to Project Management, Undergraduate, 2018 - 2019, 2017 - 2018

Nonlinear Control Systems, Undergraduate, 2018 - 2019
 Introduction to Project Management, Undergraduate, 2018 - 2019, 2017 - 2018
 Fundamentals of Electrical and Electronics , Undergraduate, 2018 - 2019
 Circuits Laboratory, Undergraduate, 2018 - 2019
 Microcomputer Laboratory, Undergraduate, 2018 - 2019
 Fundamentals of Electrical and Electronics, Undergraduate, 2018 - 2019

Jury Memberships

Doctorate, Doctorate, Eskişehir Teknik Üniversitesi, December, 2020

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Robust position/force control of nonholonomic mobile manipulator for constrained motion on surface in task space**
 ELİBOL SEÇİL G., Obuz S., PARLAKTUNA O.
 Turkish Journal of Electrical Engineering and Computer Sciences, vol.30, no.3, pp.785-804, 2022 (SCI-Expanded)
- II. **Closed-Loop Neuromuscular Electrical Stimulation Method Provides Robustness to Unknown Time-Varying Input Delay in Muscle Dynamics**
 OBUZ S., Duenas V. H., Downey R. J., Klotz J. R., Dixon W. E.
 IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY, vol.28, no.6, pp.2482-2489, 2020 (SCI-Expanded)
- III. **Renewable and energy storage resources for enhancing transient stability margins: A PDE-based nonlinear control strategy**
 OBUZ S., Ayar M., Trevizan R. D., Ruben C., Bretas A. S.
 INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, vol.116, 2020 (SCI-Expanded)
- IV. **Synchronization of Uncertain Euler-Lagrange Systems With Uncertain Time-Varying Communication Delays**
 Klotz J. R., OBUZ S., Kan Z., Dixon W. E.
 IEEE TRANSACTIONS ON CYBERNETICS, vol.48, no.2, pp.807-817, 2018 (SCI-Expanded)
- V. **A Distributed Control Approach for Enhancing Smart Grid Transient Stability and Resilience**
 Ayar M., OBUZ S., Trevizan R. D., Bretas A. S., Latchman H. A.
 IEEE TRANSACTIONS ON SMART GRID, vol.8, no.6, pp.3035-3044, 2017 (SCI-Expanded)
- VI. **Unknown time-varying input delay compensation for uncertain nonlinear systems**
 OBUZ S., Klotz J. R., Kamalapurkar R., Dixon W.
 AUTOMATICA, vol.76, pp.222-229, 2017 (SCI-Expanded)
- VII. **Isometric Torque Control for Neuromuscular Electrical Stimulation With Time-Varying Input Delay**
 Merad M., Downey R. J., OBUZ S., Dixon W. E.
 IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY, vol.24, no.3, pp.971-978, 2016 (SCI-Expanded)
- VIII. **Time-Varying Input and State Delay Compensation for Uncertain Nonlinear Systems**
 Kamalapurkar R., Fischer N., OBUZ S., Dixon W. E.
 IEEE TRANSACTIONS ON AUTOMATIC CONTROL, vol.61, no.3, pp.834-839, 2016 (SCI-Expanded)

Articles Published in Other Journals

- I. **Cyber-physical robust control framework for enhancing transient stability of smart grids**
keywordsOther keywords
 Ayar M., Trevizan R. D., OBUZ S., Bretas A. S., Latchman H. A., Bretas N. G.
 IET CYBER-PHYSICAL SYSTEMS: THEORY & APPLICATIONS, vol.2, no.4, pp.198-206, 2017 (ESCI)

- II. **Cyber-physical robust control framework for enhancing transient stability of smart grids**
TREVIZAN R., AYAR M., OBUZ S., BRETAS A., LATCHMAN H., BRETAS N.
IET Cyber-Physical Systems: Theory Applications, 2017 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Cooperative Control of Energy Storage for Transient Stability Enhancement**
Trevizan R. D., Ayar M., Bretas A. S., OBUZ S.
IEEE-Power-and-Energy-Society General Meeting (PESGM), Oregon, United States Of America, 5 - 10 August 2018
- II. **A Robust Decentralized Control Framework for Enhancing Smart Grid Transient Stability**
AYAR M., TREVIZAN R., OBUZ S., BRETAS A., LATCHMAN H.
IEEE PES General Meeting, 16 - 20 July 2017
- III. **A Robust Decentralized Control Framework or Enhancing Smart Grid Transient Stability**
Ayar M., Trevizan R. D., Bretas A. S., Latchman H., OBUZ S.
2017 IEEE Power & Energy Society General Meeting, Illinois, United States Of America, 16 - 20 July 2017
- IV. **Control of an Uncertain Nonlinear System with Known Time-Varying Input Delays with Arbitrary Delay Rates**
Chakraborty I., OBUZ S., Dixon W. E.
IFAC PAPERSONLINE, Monterrey, Mexico, 23 - 25 August 2016, vol.49, pp.522-527
- V. **Image-Based Tracking Control in the Presence of Time-Varying Input and State Delays**
Chakraborty I., OBUZ S., Dixon W. E.
2016 IEEE CONFERENCE ON CONTROL APPLICATIONS (CCA), Buenos Aires, Argentina, 19 - 22 September 2016
- VI. **Control of an Uncertain Euler-Lagrange System with Known Time-Varying Input Delay: A PDE-Based Approach**
Chakraborty I., OBUZ S., Licitra R. A., Dixon W. E.
2016 AMERICAN CONTROL CONFERENCE (ACC), Boston, 6 - 08 July 2016, pp.4344-4349
- VII. **Compensating for Uncertain Time-varying Delayed Muscle Response in Isometric Neuromuscular Electrical Stimulation Control**
OBUZ S., Downey R. J., parikh a., Dixon W. E.
2016 AMERICAN CONTROL CONFERENCE (ACC), Boston, 6 - 08 July 2016, pp.4368-4372
- VIII. **Lyapunov-Based Control of an Uncertain Euler-Lagrange System with Uncertain Time-Varying Input Delays without Delay Rate Constraints**
OBUZ S., parikh a., Chakraborty I., Dixon W. E.
IFAC PAPERSONLINE, İstanbul, Turkey, 22 - 24 June 2016, vol.49, pp.141-146
- IX. **A Practical PI Tuning Approach For Time Delay Systems**
ONAT C., HAMAMCI S. E., OBUZ S.
10th IFAC Workshop on Time Delay Systems, 22 - 24 June 2012, vol.45, pp.102-107
- X. **Predictor-Based Robust Control of Uncertain Nonlinear Systems Subject to Input Delay**
OBUZ S., cekic s. c., tathcioğlu e., dawson D. M.
10th IFAC Workshop on Time Delay Systems, 22 - 24 June 2012
- XI. **Unknown time-varying input delay compensation for neuromuscular electrical stimulation**
OBUZ S., Downey R. J., Klotz J. R., Dixon W. E.
IEEE Control Applications (CCA), 21 - 23 September 2015
- XII. **Synchronization of uncertain Euler-Lagrange systems with unknown time-varying communication delays**
Klotz J. R., OBUZ S., KAN Z., Dixon W. E.
American Control Conference (ACC), 1 - 03 July 2015
- XIII. **Transient Response Control by Fractional-Order PI Controllers**
HAMAMCI S. E., OBUZ S.
ASME 2011 International Design Engineering Technical Conferences and Computers and Information in

Scientific Refereeing

SAKARYA UNIVERSITY JOURNAL OF SCIENCE, National Scientific Refreed Journal, September 2020
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, SCI Journal, April 2020
IEEE TRANSACTIONS ON SYSTEMS MAN CYBERNETICS-SYSTEMS, SCI Journal, November 2019
IEEE TRANSACTIONS ON SYSTEMS MAN CYBERNETICS-SYSTEMS, SCI Journal, June 2019
IEEE TRANSACTIONS ON SMART GRID, SCI Journal, October 2018
IEEE TRANSACTIONS ON AUTOMATIC CONTROL, SCI Journal, June 2018
IEEE TRANSACTIONS ON SMART GRID, SCI Journal, June 2018
IEEE TRANSACTIONS ON SYSTEMS MAN CYBERNETICS-SYSTEMS, SCI Journal, June 2018
INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL, SCI Journal, April 2018
INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL, SCI Journal, April 2017
INTERNATIONAL JOURNAL OF ROBUST AND NONLINEAR CONTROL, SCI Journal, March 2017

Metrics

Publication: 23
Citation (WoS): 172
Citation (Scopus): 189
H-Index (WoS): 6
H-Index (Scopus): 5

Scholarships

YLSY, Ministry of Education, 2009 - 2016

Awards

Obuz S., best student paper award, Ieee, September 2015