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Publons / Web Of Science ResearcherID: A-2505-2014

ScopusID: 6602149869

Yoksis Researcher ID: 15187

Learning Knowledge

Doctorate 1998 - 2002	Université de Versailles Saint-Quentin-en-Yvelines, Laboratoire De Robotique De Paris, Robotik, France
Postgraduate 1997 - 1998	Ecole Nationale Supérieure d'Arts et Métiers, Paris, Robotik Sistemler Mühendisliği, France
Undergraduate 1993 - 1997	Istanbul Technical University, Makine Fakültesi, Makine Mühendisliği Bölümü, Turkey

Foreign Languages

Spanish, A1 Beginner

English, C1 Advanced

French, C1 Advanced

Academic Titles / Tasks

Associate Professor 2014 - Continues	Istanbul Technical University, Makina, Makina Mühendisliği
Associate Professor 2014 - 2014	Ecole Nationale D'ingénieurs De Metz

Assistant Professor

2004 - 2013

Istanbul Technical University, Makina, Makina Mühendisliği

Assistant Professor

2005 - 2005

Université de Versailles Saint-Quentin-en-Yvelines

Research Assistant PhD

2002 - 2004

Istanbul Technical University, Makina, Makina Mühendisliği

Research Assistant

1998 - 2002

Université de Versailles Saint-Quentin-en-Yvelines, Laboratoire De Robotique De Paris

Supported Projects

1. Sancak K. V., Bayraktaroğlu Z. Y., TUBITAK Project, Altınay İnsansı Robot AIR, 2018 - 2021
2. Bayraktaroğlu Z. Y., TUBITAK Project, İki Ayaklı Yürüyen Robot Tasarımı, Prototip İmalatı ve Kontrolü, 2007 - 2011
3. Bayraktaroğlu Z. Y., Other International Funding Programs, Design And Construction Of A Wheel-less Snake-like Robot Prototype, 2004 - 2006

Scholarships

Yurtdışı Doktora Bursu, YOK, 1998 - 2002

Designed Lessons

Bayraktaroğlu Z. Y., Experimental Robot Modeling & Control, Doctorate, 2013 - 2014

Published journal articles indexed by SCI, SSCI, and AHCI

1. **A Compliant Teleoperation System by Utilizing Haptic Guidance and Series Elastic Actuator-Based Gripper**
Argin O. F., Kaya O., Bayraktaroğlu Z. Y., Ertugrul S.
Journal of Mechanisms and Robotics, vol.15, no.4, 2023 (SCI-Expanded)
2. **Nonlinear Computed Torque Control of 6-Dof Parallel Manipulators**
Sancak K. V., Bayraktaroğlu Z. Y.
International Journal of Control, Automation and Systems, vol.20, pp.2297-2311, 2022 (SCI-Expanded)
3. **Single-master/multi-slave haptic teleoperation: a force control scheme**
Argin Ö. F., Bayraktaroğlu Z. Y.
INDUSTRIAL ROBOT-THE INTERNATIONAL JOURNAL OF ROBOTICS RESEARCH AND APPLICATION, vol.49, no.1, pp.76-87, 2022 (SCI-Expanded)
4. **Design and control of a cable-driven rehabilitation robot for upper and lower limbs**
Oyman E. L., Korkut M. Y., Yılmaz C., Bayraktaroğlu Z. Y., ARSLAN M. S.
Robotica, vol.40, pp.1-37, 2022 (SCI-Expanded)
5. **Observer-based friction compensation in heavy-duty parallel robot control**

Sancak K. V., Bayraktaroğlu Z. Y.

Journal of Mechanical Science and Technology, vol.35, pp.3693-3704, 2021 (SCI-Expanded)

6. **Consistent dynamic model identification of the Stäubli RX-160 industrial robot using convex optimization method**

Argın Ö. F., Bayraktaroğlu Z. Y.

Journal of Mechanical Science and Technology, vol.35, pp.2185-2195, 2021 (SCI-Expanded)

7. **A modular bilateral haptic control framework for teleoperation of robots**

Bayraktaroglu Z. Y., Argın Ö. F., HALIYO S.

ROBOTICA, vol.37, no.2, pp.338-357, 2019 (SCI-Expanded)

8. **Modeling and control of a spherical rolling robot: a decoupled dynamics approach**

KAYACAN E., Bayraktaroglu Z. Y., SAEYS W.

ROBOTICA, vol.30, pp.671-680, 2012 (SCI-Expanded)

9. **Snake-like locomotion: Experimentations with a biologically inspired wheel-less snake robot**

Bayraktaroglu Z. Y.

MECHANISM AND MACHINE THEORY, vol.44, no.3, pp.591-602, 2009 (SCI-Expanded)

10. **Understanding snakelike locomotion through a novel push-point approach**

Bayraktaroglu Z. Y., BLAZEVIC P.

JOURNAL OF DYNAMIC SYSTEMS MEASUREMENT AND CONTROL-TRANSACTIONS OF THE ASME, vol.127, no.1, pp.146-152, 2005 (SCI-Expanded)

11. **A controllability criterion based on a physical analogy: Limbless locomotion and object grasping in robotics**

Bayraktaroglu Z. Y., BLAZEVIC P.

ROBOTICA, vol.22, pp.493-503, 2004 (SCI-Expanded)

12. **Snake-like locomotion: integration of geometry and kineto-statics**

Bayraktaroglu Z. Y., BUTEL F., Pasqui V., BLAZEVIC P.

ADVANCED ROBOTICS, vol.14, no.6, pp.447-458, 2000 (SCI-Expanded)

Articles Published in Other Journals

1. **Design and Development of the I.T.U. Biped Robot**

Bayraktaroglu Z. Y., Acar M., Gerçek A., TAN N. M.

GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.31, no.1, pp.251-271, 2018 (ESCI)

Books & Book Chapters

1. **Robot Teknolojisine Giriş: Matematiksel Modelleme**

Bayraktaroğlu Z. Y.

Nobel Yayın Dağıtım, Ankara, 2018

Refereed Congress / Symposium Publications in Proceedings

1. **Implementation of an Adaptive Control Algorithm on a Six DOF Robot Manipulator**

Danış M. U., Bayraktaroğlu Z. Y.

International Conference on Control, Decision and Information Technologies (CoDIT), Rome, Italy, 3 - 06 July 2023, pp.2170-2175

2. **Experimental Comparison of H-Infinity Synthesis and Feedback Linearization on a MIMO Gimbal Example**

Ozcelik M., Kurkcu B., Bayraktaroğlu Z. Y.

2023 IEEE Conference on Control Technology and Applications, CCTA 2023, Bridgetown, Barbados, 16 - 18 August 2023, pp.984-991

3. **Tam Otomatik Elektrostatik Toz Boya Robotu**
Herdili M., Bayraktaroğlu Z. Y.
TOK2021 Otomatik Kontrol Ulusal Toplantısı, Van, Turkey, 2 - 04 September 2021, pp.234-240
4. **Peg-in-a-hole by haptic teleoperation**
ARGIN Ö. F., BAYRAKTAROĞLU Z. Y.
2019 8th International Conference on Mechatronics and Control Engineering, Paris, France, 23 July 2019
5. **6-eksenli Endüstriyel Manipülatörün Eklem Sürtünmelerinin Tanılanması**
ARGIN Ö. F., Akbaş S., Kaya M., BAYRAKTAROĞLU Z. Y.
TOK2018 Otomatik Kontrol Ulusal Toplantısı, Kayseri, Turkey, 12 - 14 September 2018, pp.337-342
6. **İşbirlikçi Robot Uygulamaları için Hibrit Konum/Kuvvet Kontrolü**
Kaya M., ARGİN Ö. F., Akbaş S., BAYRAKTAROĞLU Z. Y.
TOK2018 Otomatik Kontrol Ulusal Toplantısı, Kayseri, Turkey, 12 - 14 September 2018, pp.367-372
7. **Modeling and control of a one-legged hopping mechanism**
Acar M., Bayraktaroğlu Z. Y.
2011 IEEE International Conference on Mechatronics, ICM 2011, İstanbul, Turkey, 13 - 15 April 2011, pp.839-844
8. **Design of a 12 DOF Biped Robot**
Acar M., Gerçek A., Tasasız B., BAYRAKTAROĞLU Z. Y.
International Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics, Targu-Mures, Romania, 14 - 15 May 2010, vol.1, pp.215-226
9. **Dalgalanma Hareketi ile Tahrik**
Kuzucu A., BAYRAKTAROĞLU Z. Y., Kürkcü B., Meriç V.
UMK'09 16. Ulusal Mekanik Kongresi, Kayseri, Turkey, 22 - 26 June 2009, vol.1, pp.853-862
10. **Design and control of biologically inspired wheel-less snake-like robot**
Bayraktaroğlu Z. Y., Kilicarslan A., Kuzucu A., Hugel V., Blazevic P.
1st IEEE RAS-EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob 2006), Pisa, Italy, 20 - 22 February 2006, pp.277-278
11. **Geometrical approach to the trajectory planning of a snake-like mechanism**
Bayraktaroglu Z. Y., Butel F., Blazevic P., Pasqui V.
1999 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'99): Human and Environment Friendly Robots with High Intelligence and Emotional Quotients', Kyeongju, South Korea, 17 - 21 October 1999, vol.3, pp.1322-1327

Academic and Administrative Experience

2012 - 2015	Program Koordinatörü	Istanbul Technical University, Lisansüstü Eğitim Enstitüsü, Mekatronik Müh.
2008 - 2010	Program Koordinatörü	Istanbul Technical University, Lisansüstü Eğitim Enstitüsü, Savunma Teknolojileri

Courses

Digital Control System Design, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Modern Control Engineering, Postgraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017

Lineer Cebir ve Uygulamaları, Undergraduate, 2022 - 2023

Introduction to Robotics, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Dynamic Systems Modeling & Simulation, Undergraduate, 2023 - 2024

Kontrol Sistemleri Tasarımı, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019

System Dynamics & Control, Undergraduate, 2017 - 2018, 2015 - 2016

Sistem Dinamiği ve Kontrol, Undergraduate, 2018 - 2019

Nonlinear Analysis & Control Methods, Doctorate, 2015 - 2016, 2011 - 2012, 2010 - 2011, 2009 - 2010, 2008 - 2009, 2007 - 2008, 2006 - 2007, 2005 - 2006, 2004 - 2005

Memberships / Tasks in Scientific Organizations

TC Robotics, Member, 2014 - Continues

Otomatik Kontrol Türk Milli Komitesi, Member, 2008 - Continues

Scientific Consultations

Işık Üniversitesi, Other, Istanbul Technical University, Makina, Makina Mühendisliği, Turkey, 2019 - Continues

İTÜNOVA Teknoloji A.Ş. / Altınay Robot Teknolojileri San. ve Tic. A.Ş., Project Consultancy, Istanbul Technical University, Makina, Makina Mühendisliği, Turkey, 2019 - 2020

İTÜNOVA Teknoloji A.Ş. / Tekhnelogos, Project Consultancy, Istanbul Technical University, Makina, Makina Mühendisliği, Turkey, 2017 - 2017

İTÜNOVA Teknoloji A.Ş. / BCS TEKNOLOJİ, Project Consultancy, Istanbul Technical University, Makina, Makina Mühendisliği, Turkey, 2015 - 2015

Mobility Activity

Other, Guest Researcher, Ecole Nationale d'Ingénieurs de Metz, France, 2014 - 2014

Other, Guest Researcher, Université de Versailles Saint-Quentin-en-Yvelines, France, 2005 - 2005

Metrics

Publication: 38

Citation (WoS): 184

Citation (Scopus): 290

H-Index (WoS): 5

H-Index (Scopus): 7

Research Areas

Mechanical Engineering, Machine Theory and Dynamics, System Dynamics and Control, Robotics, Mechatronics, Modeling and Simulation of Dynamic Systems, Engineering and Technology