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Education Information

Doctorate, Middle East Technical University, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey
2000 - 2008

Postgraduate, Middle East Technical University, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey
1997 - 2000

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey
1993 - 1997

Research Areas

Field and Service Robots, Human and Robot Interaction, Robotics

Advising Theses

Arıkan K. B., INTERACTION OF A FLYING ROBOT WITH A HUMAN AGENT FOR TRANSPORTATION TASK, Postgraduate, M.KUTAY(Student), 2024

Arıkan K. B., Cognitive modelling and analysis of joint improvisation modality using the experimental data, Postgraduate, A.DUMAN(Student), 2023

Arıkan K. B., Turgut A. E., Collaboration of a flying robot and a ground vehicle by haptic interaction, Postgraduate, A.SÜHEYLA(Student), 2022

Arıkan K. B., Turgut A. E., Model-based evaluation of the control strategies of a hand rehabilitation robot based on motor learning principles, Postgraduate, O.CAN(Student), 2022

Arıkan K. B., Kurtuluş D. F., MODELLING AND CONTROL OF 3D FLAPPING FLIGHT, Postgraduate, Ö.ÇALIŞ(Student), 2022

Arıkan K. B., Ünal B., Development of experimental setups to investigate the social interaction by the aid of mirror game paradigm, Postgraduate, U.CANDAN(Student), 2022

Arıkan K. B., Kurtuluş D. F., Modeling of the hawkmoth wing and its implementation in a four-bar flapping wing mechanism, Postgraduate, A.ALTUGA(Student), 2022

Arıkan K. B., Yazgan E., Cognitive modelling and analysis of leader-follower modality using experimental data, Postgraduate, Ö.KARACA(Student), 2022

Arıkan K. B., Development of a human-animation interaction system to evaluate synchronization, prediction and implicit learning, Postgraduate, Y.ERSAN(Student), 2022

Arıkan K. B., Turgut A. E., Development of 3-D printed exohand for mirror therapy, Postgraduate, T.YILMAZ(Student),

2022

- Arikan K. B., Özbek M. E., Modeling and control of oil well drilling tower, Doctorate, A.NOBAHAR(Student), 2020
- Arikan K. B., Turgut A. E., CONTROL AND TRAJECTORY PLANNING OF A QUADROTOR WITH A 2-DOF ROBOTIC ARM FOR PRECISE TARGET ENGAGEMENT, Postgraduate, M.ANIL(Student), 2020
- Arikan K. B., Kurtuluş D. F., DESIGNING AUTOPILOT AND GUIDANCE ALGORITHMS TO CONTROL TRANSLATIONAL AND ROTATIONAL DYNAMICS OF A FIXED WING VTOL UAV, Doctorate, A.GÜÇLÜ(Student), 2020
- Arikan K. B., Alemdaroğlu H. N., Closed-loop dynamics of a class of hybrid (multi-modal) flying robots, Doctorate, M.ISMAIL(Student), 2020
- Arikan K. B., Turgut A. E., MODELING, SIMULATION, AND CONTROL OF A QUADROTOR HAVING A 2-DOF ROBOTIC ARM, Postgraduate, N.BULUT(Student), 2019
- Arikan K. B., Ertan H. B., Optimal design of the robotic exoskeleton for hand rehabilitation, Doctorate, M.HASSAN(Student), 2019
- Arikan K. B., Turan M., Optimization of central pattern generators, Doctorate, A.ELBORI(Student), 2018
- Arikan K. B., Development of a collaborative delivery system with unmanned aerial vehicles and delivery trucks, Doctorate, S.ELHADI(Student), 2018
- Arikan K. B., Kutsal T., Investigation and assessment of mirror neuron activity for rehabilitation purposes, Doctorate, G.BAYER(Student), 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Virtual dynamic interaction games reveal impaired multisensory integration in women with migraine**
Ince M. S., Guzel I., Akgor M. C., BAHÇELİOĞLU M., Arikan K. B., Okasha A., Sengezer S., BELEN H. B.
Headache, vol.64, no.5, pp.482-493, 2024 (SCI-Expanded)
- II. **Performance assessment of tripping and drilling operations controllers on an experimental drilling rig prototype**
Nobahar A., Arikan K. B., Ozbek M. E., Naseri B.
GEOENERGY SCIENCE AND ENGINEERING, vol.226, 2023 (SCI-Expanded)
- III. **Modelling and controlling of drill string stick slip vibrations in an oil well drilling rig**
Sadeghi A. N., Arikan K. B., Ozbek M. E.
JOURNAL OF PETROLEUM SCIENCE AND ENGINEERING, vol.216, 2022 (SCI-Expanded)
- IV. **Torsional model of the drill string, and real-time prediction of the bit rotational speed and the torque on bit, in an oil well drilling tower**
Sadeghi A. N., Arikan K. B., Ozbek M. E.
JOURNAL OF PETROLEUM SCIENCE AND ENGINEERING, vol.195, 2020 (SCI-Expanded)
- V. **Evaluation of the Disturbance Rejection Performance of an Aerial Manipulator**
Aydemir M., Arikan K. B.
JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS, vol.97, no.3-4, pp.451-469, 2020 (SCI-Expanded)
- VI. **Robust and adaptive control design of a drilling rig during the operating modes**
Sadeghi A. N., Arikan K. B., Ozbek M. E., Baranoglu B.
MEASUREMENT & CONTROL, vol.52, no.5-6, pp.702-719, 2019 (SCI-Expanded)
- VII. **Anticipatory effect of execution on observation: an approach using ExoPinch finger robot**
Arikan K. B., Zadeh H. G. M., TURGUT A. E., ZİNNUROĞLU M., Bayer G., GÜNENDİ Z., CENGİZ B.
TURKISH JOURNAL OF MEDICAL SCIENCES, vol.49, no.4, pp.1054-1067, 2019 (SCI-Expanded)
- VIII. **Analysis of mirror neuron system activation during action observation alone and action observation with motor imagery tasks**
CENGİZ B., VURALLI D., ZİNNUROĞLU M., Bayer G., Golmohammadzadeh H., GÜNENDİ Z., TURGUT A. E., Irfanoglu B., Arikan K. B.
EXPERIMENTAL BRAIN RESEARCH, vol.236, no.2, pp.497-503, 2018 (SCI-Expanded)
- IX. **Evaluation and optimization of nonlinear central pattern generators for robotic locomotion**
Elbori A., Turan M., Arikan K. B.

- Control Engineering and Applied Informatics, vol.20, no.3, pp.89-98, 2018 (SCI-Expanded)
- X. **Modelling and optimisation of an 8 x 8 heavy duty vehicle's hydro-pneumatic suspension system**
Kucuk K., Yurt H. K., Arıkan K. B., Mrek H.
INTERNATIONAL JOURNAL OF VEHICLE DESIGN, vol.71, no.1-4, pp.122-138, 2016 (SCI-Expanded)
- XI. **Cue-based aggregation with a mobile robot swarm: a novel fuzzy-based method**
Arvin F., TURGUT A. E., Bazyari F., Arıkan K. B., Bellotto N., Yue S.
ADAPTIVE BEHAVIOR, vol.22, no.3, pp.189-206, 2014 (SCI-Expanded)
- XII. **A test bench to study bioinspired control for robot walking**
Arıkan K. B., İrfanoğlu B.
Control Engineering and Applied Informatics, vol.13, no.2, pp.76-80, 2011 (SCI-Expanded)
- XIII. **Identification of linear handling models for road vehicles**
Arıkan K., ÜNLÜSOY Y. S., Korkmaz I., Çelebi A.
Vehicle System Dynamics, vol.46, no.7, pp.621-645, 2008 (SCI-Expanded)

Articles Published in Other Journals

- I. **The link between learning performance, immobility in the forced swim test, and hippocampal glia**
Arıkan K. B., Ünal B., Sara M. Y., Ünal Ç. T.
Experimental Biomedical Research , vol.5, no.1, pp.23-37, 2022 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **A Bio-Inspired Control Approach for 3D Flapping-Flight**
Arıkan K. B., Kurtuluş D. F.
International Conference on Aeronautical Sciences, Engineering and Technology, Masqat, Oman, 3 - 05 October 2023, pp.3-13
- II. **Learning How to Use a Supernumerary Thumb**
Kaplan A. S., Ödemiş E. A., Doğan E., Yıldırım M. O., Lahdili Y., Okasha A., Arıkan K. B.
20th International Conference on Informatics in Control, Automation and Robotics, ICINCO 2023, Rome, Italy, 13 - 15 November 2023, vol.1, pp.489-494
- III. **Modeling and Evaluation of Human Motor Learning by Finger Manipulandum**
Okasha A., Sengezer S., ÖZDEMİR O., YOZGATLIGİL C., TURGUT A. E., Arıkan K. B.
14th International Conference on Social Robotics (ICSR) - Social Robots for Assisted Living and Healthcare, Emphasizing on the Increasing Importance of Social Robotics in Human Daily Living and Society, Florence, Italy, 13 - 16 December 2022, pp.325-334
- IV. **Evaluation of Haptic Interaction in Mirror Game by a Cerebellum Inspired Virtual Player**
Karaca O., Okasha A., Duman A., Candan U., Arıkan K. B.
9th IEEE RAS/EMBS International Conference for Biomedical Robotics and Biomechatronics (BioRob), Seoul, South Korea, 21 - 24 August 2022
- V. **Computed Torque Control of an Aerial Manipulation System with a Quadrotor and a 2-DOF Robotic Arm**
Bulut N., TURGUT A. E., Arıkan K. B.
16th International Conference on Informatics in Control, Automation and Robotics (ICINCO), Prague, Czech Republic, 29 - 31 July 2019, pp.510-517
- VI. **Fluid-structure interaction analysis of a four-bar flapping wing mechanism**
Beker C., TURGUT A. E., Arıkan K. B., KURTULUŞ D. F.
9th ECCOMAS Thematic Conference on Smart Structures and Materials, SMART 2019, Paris, France, 8 - 11 July 2019, pp.1637-1647
- VII. **Design of a Robotic Bicopter**

Albayrak O. B., Ersan Y., Bagbasi A. S., Basaranoglu A. T., Arıkan K. B.

7th IEEE International Conference on Control, Mechatronics and Automation (ICCMA), Delft, Netherlands, 6 - 08 November 2019, pp.98-103

VIII. Experimental and numerical results of a flapping wing four bar mechanism

Senol M., Arıkan K. B., KURTULUŞ D. F.

55th AIAA Aerospace Sciences Meeting, Texas, United States Of America, 9 - 13 January 2017

IX. Attitude and altitude stabilization of a fixed wing VTOL unmanned air vehicle

Güçlü A., Arıkan K. B., KURTULUŞ D. F.

AIAA Modeling and Simulation Technologies Conference, 2016, Washington, United States Of America, 13 - 17 June 2016

X. Development of a single degree of freedom inertial measurement system

Kara S. E., Golmohammedzadeh H., Arıkan K. B.

20th Annual International Conference on Mechatronics and Machine Vision in Practice, M2VIP 2013, Ankara, Turkey, 20 September 2013, pp.153-158

XI. Disturbance rejection control of a quadrotor equipped with A 2 DOF manipulator

Aydemir M., Arıkan K. B., Irfanoğlu B.

20th Annual International Conference on Mechatronics and Machine Vision in Practice, M2VIP 2013, Ankara, Turkey, 20 September 2013, pp.26-32

Supported Projects

Arıkan K. B., Gürses S., Turgut A. E., Yozgatlıgil C., Süner Pla Cerda S., Zinnuroğlu M., Günendi Z., Cengiz B., Batur Çağlayan H. Z., Boran H. E., et al., TUBITAK Project, El İçin Robotik Ayna Terapi Sisteminin Motor Öğrenme Temelli Geliştirilmesi, 2021 - 2024

Arıkan K. B., Ünal Ç. T., Cengiz B., Halıcı U., Ulusoy İ., Zinnuroğlu M., Ünal B., Kalaycıoğlu C., Çiçek M., Bahçelioğlu M., et al., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, NÖROM - Nörobilim Ve Nöroteknoloji Mükemmeliyet Merkezi - Ulusal Nörobilim Araştırma Merkezi, 2019 - 2024

Arıkan K. B., Project Supported by Higher Education Institutions, Development of a human-robot interaction setup to investigate the social interaction by the aid of mirror game paradigm, 2020 - 2023

Arıkan K. B., Ünal B., Ünal Ç. T., TUBITAK Project, Çoklu Bellek Sistemlerinin Nöroanatomik Mekanizmalarının Bireysel Farklılıklar Işığında İncelenmesi, 2019 - 2023

Arıkan K. B., Gökçay E., Özbek M. E., Baranoğlu B., TUBITAK Project, Yerli Modüler 350 Ton Kapasiteli Sondaj Kulesi Tasarımı ve İmalatı, 2016 - 2022

Arıkan K. B., Sert O., Uyanık H., Kurtuluş D. F., TUBITAK Project, Biyoesinlenmiş Mikro İnsansız Hava Aracının Geliştirilmesi ve Testleri, 2017 - 2020

Arıkan K. B., Cengiz B., Turgut A. E., Zinnuroğlu M., TUBITAK Project, Ayna Nöronların İrdelenmesi Ve Robotik Ayna Terapisi Sisteminin Geliştirilmesi, 2015 - 2018

Arıkan K. B., Uyanık H., Kurtuluş D. F., TUBITAK Project, TÜBİTAK 213M327 Piezoelektrik Malzemelerin Çırpın Kanatlı Mikro Hava Araçlarına Uygulamalarının Sayısal Ve Deneysel İncelenmesi, 2014 - 2016

Patent

Kurtuluş D. F., Turgut A. E., Arıkan K. B., MİKRO İNSANSIZ HAVA ARAÇLARI İÇİN YENİ BİR TEST STANDI, Patent, CHAPTER G Physics, The Invention Registration Number: TR2021001999B , Standard Registration, 2023

Metrics

Publication: 25

Citation (WoS): 58

Citation (Scopus): 173

H-Index (WoS): 5

H-Index (Scopus): 7