

Prof. MEHMET ARIF ADLI

Personal Information

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International Researcher IDs

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Biography

ADLI, Mehmet Arif (Dr. Eng.)

Mehmet Arif Adli was graduated from Mechanical Engineering Department, Middle East Technical University (METU), Ankara, Turkey, in 1986. He received his MSc. and Dr. Eng. degrees both in Mechanical Engineering in 1990 and 1993 from Ritsumeikan University, Kyoto, Japan. After completing his Dr. Eng. degree he worked as a frontier researcher from 1993 to 1996 at Bio-Mimetic Control Research Center, affiliated with "The Institute of Physical and Chemical Research (RIKEN)", Japan.

In June 1997 he joined Marmara University in Istanbul, teaching at Mechanical Engineering Department. From 2006 to 2013 he was with "The Scientific and Technological Research Council of Turkey, TÜBİTAK" where, after working at the Science Fellowships and Grant Programmes Department as an advisor to the president for about a year, he served as the director of Academic Research Funding Program Directorate until 2008. He was appointed as Vice President of TÜBİTAK from 2008, to 2013 responsible from academic and public R&D funding, and fellowship programs. He joined Gazi University, Department of Mechanical Engineering as a full-time professor in 2013. He served as Dean of the Faculty of Applied Sciences between 2016 and 2019. Besides his teaching activities he took part as the board member at Gazi Technopark from 2016-2020.

In March 2019 Dr. Adli was appointed as the Academy Vice-President of Turkish Aerospace Inc.(TAI) responsible from organizing and handling of training and education of TAI employees, mainly engineers. From 2020 to 2022 he was the Vice president of TAI responsible from Human Resources and Talent Management.

Dr. Adli has been the the Turkish delegate in COST (Coordination of Science and Technology in Europe) from 2011 to 2024.

Education Information

Doctorate, Ritsumeikan Üniversitesi, Makina Mühendisliği, Japan 1990 - 1993

Postgraduate, Ritsumeikan Üniversitesi, Makina Mühendisliği, Japan 1988 - 1990

Undergraduate, Middle East Technical University, Faculty Of Engineering, Makine Mühendisliği Bölümü, Turkey 1982 - 1986

Foreign Languages

Japanese, B2 Upper Intermediate

English, C1 Advanced

Dissertations

Doctorate, Analysis and Utilities of Internal Force Effect in Closed Chain Mechanisms, Ritsumeikan Üniversitesi, Makina Mühendisliği, 1993

Postgraduate, Basic Study on the Effect of Internal Forces in a Planar Parallel Manipulator, Ritsumeikan Üniversitesi, Makina Mühendisliği, 1990

Research Areas

Machine Theory and Dynamics, Machine Dynamics, Robotics, Mechatronics

Academic Titles / Tasks

Professor, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, 2011 - Continues

Professor, Marmara University, Faculty Of Engineering, Mechanical Engineering, 2007 - 2011

Associate Professor, Marmara University, Faculty Of Engineering, Mechanical Engineering, 1999 - 2007

Assistant Professor, Marmara University, Faculty Of Engineering, Mechanical Engineering, 1997 - 1998

Research Assistant, Ritsumeikan Üniversitesi, Mühendislik Fakültesi, Bilgisayar Ve Bilişim Sistemleri Mühendisliği, 1992 - 1992

Research Assistant, Middle East Technical University, Faculty Of Engineering, Makine Mühendisliği Bölümü, 1987 - 1988

Academic and Administrative Experience

Academic Performance D. Board Member, Gazi University, Rektörlük, 2017 - 2019

Dean, Gazi University, Uygulamalı Bilimler Fakültesi, 2016 - 2019

Marmara University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2003 - 2005

Frontier Researcher, The Institute of Physical and Chemical Research - RIKEN, Bio-Mimetic Control Center, Laboratory of Bio-Mimetic Control Systems, 1993 - 1996

Courses

ADVANCED ROBOTICS, Doctorate, 2022 - 2023, 2021 - 2022

ADVANCED DYNAMICS, Doctorate, 2021 - 2022

İLERİ DİNAMİK, Doctorate, 2020 - 2021, 2019 - 2020

İLERİ ROBOTİK, Doctorate, 2020 - 2021, 2019 - 2020, 2018 - 2019

Advising Theses

Adlı M. A., Saygın A., DYNAMIC MODELING AND CONTROL OF A MISSILE SEEKER, Postgraduate, M.YASİN(Student), 2022

ADLI M. A., Control Of Liquid Transfer By Dual-Arm Robot, Doctorate, B.NASERİ(Student), 2021

ADLI M. A., Bir itki vektör kontrol performans test sisteminin dinamik incelenmesi, Postgraduate, A.ÜNAL(Student), 2019

ADLI M. A., Design And Impedance Control Of A Series Elastic Actuator For Rehabilitation Robots, Postgraduate, Y.ÜLGER(Student), 2019

ADLI M. A., ÖZKAN B., Dynamic Modelling And Control Of Three-Degrees-Of-Freedom Parallel Axis Stabilization Platform, Postgraduate, R.UĞUR(Student), 2019

ADLI M. A., Compliant control of electric power assisted steering systems in vehicles, Doctorate, A.EMRE(Student), 2009

ADLI M. A., Rehabilitasyon amaçlı bir robot kolunun kuvvet ve konumunun zeki kontrolü, Doctorate, E.AKDOĞAN(Student), 2007

ADLI M. A., Modelling of the effect of centrifugal forces on bearings in planetary gear mechanism of a yarn twisting machine, Postgraduate, K.KAAN(Student), 2005

ADLI M. A., İnsanın iki kolunun ortak hareketi esnasında oluşan eklem momentlerinin elektromyografi sinyalleri yardımıyla analizi, Postgraduate, Y.ZİYA(Student), 2005

ADLI M. A., Designing and manufacturing of a rehabilitation robot with three degrees of freedom, Postgraduate, V.İLHAN(Student), 2005

ADLI M. A., Kinematic and dynamic analysis of a curved link robot, Postgraduate, O.CEM(Student), 2005

ADLI M. A., Computer simulation of granular flows, Postgraduate, N.ETİSOY(Student), 2003

ADLI M. A., Düzlemsel harekette nesne ile kartezyen robot kolu arasındaki temas kuvvetlerinin kontrolü, Postgraduate, A.EMRE(Student), 2002

ADLI M. A., Tool management in flexible manufacturing systems, Postgraduate, D.GÖKÇE(Student), 2000

Jury Memberships

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Gazi Üniversitesi, July, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Gazi Üniversitesi, June, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Ankara Yıldırım Beyazıt Üniversitesi, February, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Orta Doğu Teknik Üniversitesi, January, 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **An expanded impedance control scheme for slosh-free liquid transfer by a dual-arm cooperative robot**
Soufiani B. N., ADLI M. A.
JOURNAL OF VIBRATION AND CONTROL, vol.27, no.23-24, pp.2793-2806, 2021 (SCI-Expanded)
- II. **Pole placement and LQR control of slosh-free liquid transportation with dual-arm cooperative robot**
Soufiani B. N., ADLI M. A.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.35, no.4, pp.2255-2267, 2020 (SCI-Expanded)
- III. **Comparative evaluation of EMG signal features for myoelectric controlled human arm prosthetics**
Karabulut D., Ortes F., Arslan Y. Z., ADLI M. A.
BIOCYBERNETICS AND BIOMEDICAL ENGINEERING, vol.37, no.2, pp.326-335, 2017 (SCI-Expanded)
- IV. **The design and control of a therapeutic exercise robot for lower limb rehabilitation: Physiotherobot**
AKDOĞAN E., Adli M. A.
MECHATRONICS, vol.21, no.3, pp.509-522, 2011 (SCI-Expanded)
- V. **Prediction of externally applied forces to human hands using frequency content of surface EMG signals**
Arslan Y. Z., Adli M. A., Akan A., BASLO M. B.
COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, vol.98, no.1, pp.36-44, 2010 (SCI-Expanded)
- VI. **Implementation and Development of an Adaptive Steering-Control System**
Cetin A. E., Adli M. A., Barkana D. E., KÜÇÜK H.
IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, vol.59, no.1, pp.75-83, 2010 (SCI-Expanded)

- VII. **Knee rehabilitation using an intelligent robotic system**
AKDOĞAN E., Tacgin E., ADLI M. A.
JOURNAL OF INTELLIGENT MANUFACTURING, vol.20, no.2, pp.195-202, 2009 (SCI-Expanded)
- VIII. **Cooperative control of a human and a robot manipulator for positioning a cart on a frictionless plane**
Cetin A. E., Adli M. A.
MECHATRONICS, vol.16, no.8, pp.461-469, 2006 (SCI-Expanded)
- IX. **Modelling and analysis of an oscillatory dynamic system using the hybrid state approach: An experimental case**
Adli M. A., Dogruel M.
JOURNAL OF VIBRATION AND CONTROL, vol.12, no.9, pp.975-993, 2006 (SCI-Expanded)
- X. **Hybrid state approach for modelling electrical and mechanical systems**
DOĞRUEL M., Adli M. A.
MATHEMATICAL AND COMPUTER MODELLING, vol.41, no.6-7, pp.759-771, 2005 (SCI-Expanded)
- XI. **CONTRIBUTION OF INTERNAL FORCES TO THE DYNAMICS OF CLOSED CHAIN MECHANISMS**
ADLI M. A., HANAFUSA H.
ROBOTICA, vol.13, pp.507-514, 1995 (SCI-Expanded)

Articles Published in Other Journals

- I. **Saf Yönelim Hareketlerini Sağlayan Üç Serbestlik Dereceli Bir Paralel Platformun Kinematik ve Dnamik Analizi**
İNAL R. U., ADLI M. A., ÖZKAN B.
Selçuk Üniversitesi Mühendislik Bilim ve Teknoloji Dergisi, vol.18, no.1, pp.14-32, 2019 (Peer-Reviewed Journal)
- II. **Design and Implementation of a Thrust Vector Control (TVC) Test System**
Unal A., Yaman K., Okur E., ADLI M. A.
JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, vol.21, no.2, pp.497-505, 2018 (ESCI)
- III. **Compliance Control and Selective Compliance Center via Internal Forces in Redundantly Actuated Closed Chain Mechanisms**
Adlı M. A., Hideo H.
Transactions of the Society of Instrument and Control Engineers(SICE), vol.29, pp.253-262, 1993 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Robotiğe Giriş : Mekanik ve Kontrol**
ADLI M. A., AKDOĞAN E.
Nobel, Ankara, 2022
- II. **A Human–Machine Interface Design to Control an Intelligent Rehabilitation Robot System**
AKDOĞAN E., ADLI M. A., TAÇGIN E., MN B.
in: Soft Computing Applications for Database Technologies Techniques and Issues, , Editor, ISBN 978-1-60566-814-7, pp.247-270, 2010

Refereed Congress / Symposium Publications in Proceedings

- I. **HELİKOPTERLER İÇİN MODEL REFERANS UYARLAMALI KONTROLCÜ TASARIMI**
ERTUĞRUL T., ADLI M. A., SALAMCI M. U., KODALAK F.
8.Savunma Teknolojileri Kongresi, Turkey, 12 - 14 October 2016

- II. **Saf Yönelim Hareketlerini Sağlayan Üç Serbestlik Dereceli Bir Paralel Platformun Kinematik ve Dinamik Analizi**
İnal R. U., ADLI M. A., ÖZKAN B.
20. Ulusal Makina Teorisi Sempozyumu, Dicle Üniversitesi, Diyarbakır, Turkey, 15 September 2021
- III. **Üç Serbestlik Dereceli Küresel Bir Paralel Manipülâtörün Kontrolü**
İNAL R. U., ADLI M. A., ÖZKAN B.
TOK2019-Otomatik Kontrol Ulusal Toplantısı, Muğla, Turkey, 11 - 14 September 2019, pp.209-214
- IV. **İtki Vektör Kontrolü (İVK) Performans Test Sisteminin Dinamik İncelenmesi**
ÜNAL A., OKUR E., YAMAN K., ADLI M. A.
ICCESEN-2017, 4 - 08 October 2017
- V. **Model Reference Adaptive Control Design For Helicopters Using Gain Scheduled Reference Models**
Ertugrul T., ADLI M. A., SALAMCI M. U.
17th IEEE International Carpathian Control Conference (ICCC), Tatranska Lomnica, Slovakia, 29 May - 01 June 2016, pp.182-187
- VI. **Compliant control of steer by wire systems**
AHMET EMRE Ç., ADLI M. A., EROL BARKANA D., KÜÇÜK H.
2009 IEEE/ASME International Conference on Advanced Intelligent Mechatronics, Singapore, Singapore, 14 - 17 July 2009, pp.636-643
- VII. **A human machine interface design for direct rehabilitation using a rehabilitation robot**
ADLI M. A., AKDOĞAN E., MN B.
CSTST, Proceedings of the 5th international conference on Soft computing as transdisciplinary science and technology, Pontoise, France, 27 - 31 October 2008, pp.78-83
- VIII. **Compliant control of electric power assisted steering systems**
Cetin A. E., Sinanoglu B., Gungor S., Kanbolat A., ADLI M. A.
Commercial Vehicle Engineering Congress and Exhibition, Chicago, IL, United States Of America, 1 - 03 November 2005
- IX. **A method for modulating the contact compliance in objects held by dual arm robots**
ADLI M. A., ITO K., HANAFUSA H.
Recent Advances in Mechatronics, 14 August 1995
- X. **Controlling the contact compliance via internal forces on objects held by dual-arm robots**
Adli M. A., Ito K., Hanafusa H.
Proceedings of the 1995 IEEE/RSJ International Conference on Intelligent Robots and Systems. Part 3 (of 3), Pittsburgh, PA, USA, 5 - 09 August 1995, vol.1, pp.62-69
- XI. **Selective compliance center by means of internal forces in redundantly actuated closed chain manipulators**
Adli M. A., Nagai K., Hanafusa H.
Proceedings of the 1992 Japan - USA Symposium on Flexible Automation Part 2 (of 2), San-Francisco, Costa Rica, 13 - 15 July 1992, pp.1277-1281
- XII. **Apparent structural stiffness of closed mechanisms under the effect of internal forces during dynamic motion**
ADLI M. A., Nagai K., Miyata K., Hanafusa H.
IEEE/RSJ International Workshop on Intelligent Robot and Systems '91, 3 - 05 November 1991, vol.2, pp.773-778
- XIII. **Study on internal forces and their use in compliance control of parallel manipulators**
Adli M. A., Nagai K., Miyata K., Hanafusa H.
Proceedings of the 29th SICE Annual Conference, Tokyo, Japan, 24 - 26 July 1990, pp.853-856
- XIV. **Effect of internal forces on the dynamics of the parallel manipulators**
ADLI M. A., Nagai K., Miyata K., Hanafusa H.
1990 IEEE International Workshop on Intelligent Motion Control, IMC 1990, İstanbul, Turkey, 20 - 22 August 1990, vol.2, pp.547-550

Metrics

Publication: 30

Citation (WoS): 354

Citation (Scopus): 471

H-Index (WoS): 6

H-Index (Scopus): 6

Scholarships

Japan MONBUSHO Scholarship, Official Institutions of Foreign Countries, 1987 - 1992

Non Academic Experience

Tük Havacılık ve Uzay Sanayii (TUSAŞ)

Company, TUSAŞ, Human Resources and Talent Management Vice Presidency

Company, TAI, Akademi Vice President

TÜBİTAK

TUBİTAK, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu , Başkanlık

TÜBİTAK

TUBİTAK, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu, Araştırma Destek Programları Başkanlığı - ARDEB

TÜBİTAK

TUBİTAK, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu, Bilim İnsanı Destekleme Daire Başkanlığı - BİDEB

TÜBİTAK

İstanbul Büyükşehir Belediyesi, Ulaşım A.Ş.

Bio-Mimetic Control Research Center, RIKEN, Japonya

Tapu ve Kadastro Genel Müdürlüğü, Konya Kadastro Müdürlüğü