



Assist. Prof. Dr. SERDAR AY

Mahmutbey Technology Campus

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Interview Hours: Pazartesi - 14:00 - 15:00 Çarşamba - 14:00 - 15:00 Cuma- 14:00 - 15:00

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EDUCATIONAL INFORMATION

Degree	University	Department	Year(s)
Doctoral Degree	Air Force Academy	Aeronautical Engineering (Phd)	2007 - 2013
Master's Degree	Eskişehir Osmangazi University	Mechanical Engineering (masters) (with Thesis)	2000 - 2003
Bachelor's Degree	Istanbul Technical University	Department of Mechanical Engineering	1988 - 1992

RESEARCH AREAS

Robotics, Mechanisms and Cogeneration Power Plants

ACADEMIC DUTIES

Duty	University	Area	Year(s)
Lecturer	National Defense University	Department of Aerospace Engineering	2006 - 2014

ADMINISTRATIVE DUTIES

Duty	University	Year(s)
Director of Research and Application Centre for Occupational Health and Safety	Altinbas University	2020 - 2024
Acting Dean	Air Force Academy	2017 - 2017

ACADEMIC AND PROFESSIONAL MEMBERSHIPS

Organisation	Membership	Year(s)
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NON-UNIVERSITY EXPERIENCE

Country	Organisation	Duty	Year(s)
United States	US Air Force Command	Flight Safety Officer Training in KC-135R Tanker Aircraft Maintenance Training in Kirtland AFB and Sheppard AFB	2016 - 2016
United States	US Air Force Command	KC-135R Tanker Aircraft Maintenance Training in Sheppard AFB, McConnell AFB and Robins AFBins AFB	1997 - 1998
Turkey	Turkish Air Force Command (TUAF)	Managerial roles in First and Second Air Supply and Maintenance Center Commands in TUAF	1992 - 2006

BOOKS

ARTICLES

ARTICLES

Improvement of the Upper Arm of KUKA KR 16 Welding Robot via Topology Optimization

Abdulrahman Ali Muthanna, AY SERDAR

Mathematical Modelling of Engineering Problems, 2025

International DOI: 10.18280/mmep.120127

A Comparative Study on The Material Selection of A Spot Welding Robotic Arm

HAMEED Abdulhameed Muneam, AY SERDAR

Academic Journal of Manufacturing Engineering, 2023

International

Design and Analysis of A Novel Robotic Arm For High Precision Micro Friction Stir Welding

ALGHLOOM Azhar Majid Qasim, AY SERDAR

AURUM Mühendislik Sistemleri ve Mimarlık Dergisi, 2023

International DOI: 10.53600/ajesa.1067298

Improved Particle Swarm Optimization Method Directed by Indirect Surrogate Modeling

PEHLİVANOĞLU YASİN VOLKAN, AY SERDAR, GÜL FARUK

Journal of Aeronautics And Space Technologies, 2015

International

PROCEEDINGS

A Novel Geometrical Method for the Determination of Reachable Workspace of a Planar Stewart Platform

AY SERDAR, HACIOĞLU ABDURRAHMAN, VATANDAŞ OSMAN ERGÜVEN

2ND INTERNATIONAL CONFERENCE AND EXHIBITION ON MECHANICAL AND AEROSPACE ENGINEERING 2014,

International

Determination of the Reachable Workspace of 6-3 Stewart Platform Mechanism

AY SERDAR, VATANDAŞ OSMAN ERGÜVEN, HACIOĞLU ABDURRAHMAN

The World Congress on Engineering 2012, 2012

International

Yeni Bir Geometrik Yaklaşımla Stewart Platform Mekanizmasının Kinematik İncelenmesi

AY SERDAR, VATANDAŞ OSMAN ERGÜVEN, HACIOĞLU ABDURRAHMAN

UMTS (ULUSAL MAKİNA TEORİSİ SEMPOZYUMU) 2011, 2011

National

A Novel Geometrical Approach to Determining the Workspace of 6-3 Stewart Platform Mechanism

AY SERDAR, VATANDAŞ OSMAN ERGÜVEN, HACIOĞLU ABDURRAHMAN

Proceedings of 5th International Conference on Recent Advances in Space Technologies - RAST2011,

International

Design and Navigation Control of an Advanced Level CANSAT

ÇELEBİ MANSUR, AY SERDAR, İBRAHİM MOHAMMED KHALİL, AYDEMİR MUSTAFA EMRE, BENSAAADA

MESSAOUD, LEWIS HENNEDIGE JAYATHU DIMUTHU KUMARA FERNANDO, AKIYAMA HIROAKI, YAMAURA

SHUSAKU

Proceedings of 5th International Conference on Recent Advances in Space Technologies - RAST2011,

International

Design and Implementation of a Rover-Back CANSAT

AYDEMİR MUSTAFA EMRE, ÇELEBİ MANSUR, AY SERDAR, VİVAS ESAU VİNCENTE, BUSTİNZA FREDY CALLE, PHAN

DAN

Proceedings of 5th International Conference on Recent Advances in Space Technologies - RAST2011,

International

PROCEEDINGS

Mission Analysis and Planning of a CANSAT

CİHAN ÇABULOĞLU, AYKİŞ HÜSEYİN, YAPACAK RESUL, ÇALIŞKAN ERHAN, AĞIRBAŞ ÖMER, ABUR ŞABAN, SOYER SÜLEYMAN, TÜRKMEN HALİT SÜLEYMAN, AY SERDAR, KARATAŞ YASİN, AYDEMİR MUSTAFA EMRE, ÇELEBİ MANSUR

Proceedings of 5th International Conference on Recent Advances in Space Technologies - RAST2011,
International

The Effect of Radius of Joint Location on Workspace Analysis of the 6-6 Stewart Platform Mechanism

AY SERDAR, VATANDAŞ OSMAN ERGÜVEN, HACIOĞLU ABDURRAHMAN
2009 4th International Conference on Recent Advances in Space Technologies,
International

PROJECTS

THESIS SUPERVISION

Numerical Analysis of a Robotic Arm Under Various Loads For Spot Welding

ABDULHAMEED MUNEAM HAMEED HAMEED

2023 Master's Degree

Obstacles Avoidance for Pick-Place Mobile Robot in Production Line Based on Image Processing

ZAID MOHAMMED ABD ALI AL-ZUBAIDI

2023 Master's Degree

Optimization and Simulation of a Smart Robotic to Facilitate Construction Activities

RANYA ALLAOUI

2023 Master's Degree

Design and Analysis of a Robotic Arm For High Precision Arc Welding System

ALI MUTHANNA ABDULRAHMAN AL-AGELE

2023 Master's Degree

A Novel Geometric Method of Singularity Avoidance For Kinematically Redundant Planar Parallel Robot Manipulators

HAFIZ MUHAMMAD USAMA AKHTAR

2023 Master's Degree

Design, Simulation and Control of a Tendon-Driven Robotic Arm

HUSSAM SALEH HAKIM HAKIM

2023 Master's Degree

An Efficient Technique for Path Planning in Autonomous Robotics

ALI IBRAHIM ALI LARBAH

2022 Master's Degree

A Comparative Study on Material Selection of a Prosthetic Robotic Arm

AMMAR SAMI SADOON ALSAMARAE

2022 Master's Degree

Prediction of Full Load Electrical Power Output of a Base Load Operated Combined Cycle Power Plant Using Artificial Neural Networks Regression

REEZAN SHAMSULDDIN MAJEED BIBANI

2022 Master's Degree

The Study on Performance Enhancement of Kirkuk Gas Power Plant

AMMAR MOHAMMED KHALAF KHALAF

2022 Master's Degree

COURSES

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COURSES

Course Type	Course Code	Course Name
Bachelor's Degree	ME200	TECHNICAL DRAWING
Bachelor's Degree	ME230	INTRODUCTION TO PROGRAMMING WITH MATLAB
Master's Degree	ME512	INTRODUCTION TO ROBOTICS
Master's Degree	ME502	COMPUTATIONAL METHODS IN ENGINEERING
Bachelor's Degree	ME103	INTRODUCTION TO MECHANICAL ENGINEERING
Bachelor's Degree	ME205	STATICS
Bachelor's Degree	ME454	MECHANISMS
Bachelor's Degree	ME491	MECHANICAL ENGINEERING DESIGN PROJECT I
Bachelor's Degree	ME492	MECHANICAL ENGINEERING DESIGN PROJECT II
Master's Degree	ME599	THESIS

PERSONAL INFORMATION

CONTACT INFORMATION

Interview Hours: Pazartesi - 14:00 - 15:00 Çarşamba - 14:00 - 15:00 Cuma- 14:00 - 15:00

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