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Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: N-9222-2013

ScopusID: 6506412303

Yoksis Researcher ID: 38658

Education Information

Doctorate, University of Pennsylvania, United States Of America 1999 - 2003

Postgraduate, Carnegie Mellon University, Mechanical Engineering, United States Of America 1997 - 1999

Undergraduate, Middle East Technical University, Faculty Of Engineering, Makine Mühendisliği Bölümü, Turkey 1992 - 1996

Foreign Languages

English

Dissertations

Doctorate, Vision Based Control of Unmanned Aerial Vehicles with Applications to an Autonomous Four Rotor Helicopter, Quadrotor, University Of Pennsylvania, 2003

Research Areas

Technical Sciences, Mechanical Engineering, Machine Theory and Dynamics, System Dynamics and Control, Mechanisms, Robotics, Mechatronics, Mechanical Vibrations, Aeronautical and Space Engineering, Aeronautical Engineering , Aircraft System Technologies, Flight Control Systems

Academic Titles / Tasks

Professor, İstanbul Technical University, Makina, Makina Mühendisliği, 2021 - Continues

Associate Professor, İstanbul Technical University, Makina, Makina Mühendisliği, 2013 - 2021

Assistant Professor, İstanbul Technical University, Makina, Makina Mühendisliği, 2007 - 2013

Lecturer PhD, İstanbul Technical University, Makina, Makina Mühendisliği, 2004 - 2007

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Hardware-in-the-Loop Testing of Automatic Lift Dropping System for Heavy Trucks**
Acar O. U., Guvenc L., Altug E.
JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS, vol.98, pp.693-703, 2020 (SCI-Expanded)
- II. **ECU controlled intelligent lift axle dropping and lifting system for heavy trucks**
Keles T., Guvenc L., Altug E.
ENGINEERING SCIENCE AND TECHNOLOGY-AN INTERNATIONAL JOURNAL-JESTECH, vol.22, no.3, pp.885-893, 2019 (SCI-Expanded)
- III. **Design and Control of a Mini Aerial Vehicle that has Four Flapping-Wings**
İŞBİTİRİCİ A., Altug E.
JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS, vol.88, pp.247-265, 2017 (SCI-Expanded)
- IV. **System Design of a Novel Tilt-Roll Rotor Quadrotor UAV**
Senkul A. F., Altug E.
JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS, vol.84, pp.575-599, 2016 (SCI-Expanded)
- V. **Design and control of a visual servomechanism for automating corneal cross-linking treatment in keratoconus patients**
Sahin O., Altug E.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.23, no.2, pp.602-614, 2015 (SCI-Expanded)
- VI. **Estimation of Unbalanced Loads in Washing Machines using Fuzzy Neural Networks**
Yörükoglu A., Altug E.
IEEE-ASME TRANSACTIONS ON MECHATRONICS, vol.18, no.3, pp.1182-1190, 2013 (SCI-Expanded)
- VII. **Cooperative Adaptive Cruise Control Implementation of Team Mekar at the Grand Cooperative Driving Challenge**
GÜVENÇ L., Uygan M. C., Kahraman K., Karaahmetoğlu R., Şentürk M., ALTAY İ., Emirler T., HARTAVİ KARCI A. E., AKSUN GÜVENÇ B., Altug E., et al.
IEEE Transactions on Intelligent Transportation Systems, vol.13, no.3, pp.1062-1074, 2012 (SCI-Expanded)
- VIII. **Design and Implementation of a Hybrid Fuzzy Logic Controller for a Quadrotor VTOL Vehicle**
Erginer B., Altug E.
INTERNATIONAL JOURNAL OF CONTROL AUTOMATION AND SYSTEMS, vol.10, no.1, pp.61-70, 2012 (SCI-Expanded)
- IX. **Image Based and Hybrid Visual Servo Control of an Unmanned Aerial Vehicle**
Ceren Z., Altug E.
JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS, vol.65, pp.325-344, 2012 (SCI-Expanded)
- X. **EKF Based Attitude Estimation and Stabilization of a Quadrotor UAV Using Vanishing Points in Catadioptric Images**
Tarhan M., Altug E.
JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS, vol.62, pp.587-607, 2011 (SCI-Expanded)
- XI. **A Catadioptric and Pan-Tilt-Zoom Camera Pair Object Tracking System for UAVs**
Tarhan M., Altug E.
JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS, vol.61, pp.119-134, 2011 (SCI-Expanded)
- XII. **Framework for development of driver adaptive warning and assistance systems that will be triggered by a driver inattention monitor**
Aytekin B., DINCMEN E., GUEVENC B. A., Altug E., GUEVENC L., Danis S., Acarman T., SEZER V., ARARAT O., Oencue S.
INTERNATIONAL JOURNAL OF VEHICLE DESIGN, vol.52, pp.20-37, 2010 (SCI-Expanded)
- XIII. **Control of a quadrotor helicopter using dual camera visual feedback**
Altug E., OSTROWSKI J., TAYLOR C.

Articles Published in Other Journals

- I. A Novel Mini Jet Engine Powered Unmanned Aerial Vehicle: Modeling and Control
Altuğ E., Türkmen A.
UNMANNED SYSTEMS, vol.10, no.01, pp.31-43, 2022 (ESCI)
- II. Design of an Automatic Item Pick-up System for Unmanned Aerial Vehicles
Mumcuoğlu M. E., Yüksel I., ALTUĞ E.
Celal Bayar University Journal of Science, vol.16, no.1, pp.25-33, 2020 (Peer-Reviewed Journal)
- III. Otonom Araçlarda Navigasyon İçin Düşük Maliyetli, Taşınabilir ve 360 Görüş Alanına Sahip Yeni Bir 3B LIDAR Sisteminin Geliştirilmesi
KAĞIZMAN A., ALTUĞ E.
Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.23, no.3, pp.759-769, 2019 (Peer-Reviewed Journal)

Books & Book Chapters

- I. Makine Mühendisliğine Giriş
KURT HABİBOĞLU S., MİSTİKOĞLU S., GEREN N., RENDE H., UZUN A., EKİCİ B., EFEOĞLU İ., ERSOY H., ERZİNCANLI F., GÜNERHAN H., et al.
Papatya Bilim Üniversite Yayıncılığı, İstanbul, 2017

Refereed Congress / Symposium Publications in Proceedings

- I. Design of a Quad-Jet VTOL UAS for Heavy-lift Applications
TÜRKMEN A., ALTUĞ E.
2020 International Conference on Unmanned Aircraft Systems (ICUAS'20), 01 September 2020, pp.875-882
- II. Otonom Araçlar için 2B Lazer Tarayıcı Kullanılarak Yeni 3B LIDAR Sistemi Elde Edilmesi ve Engel Tespiti
KAĞIZMAN A., ALTUĞ E.
Otomatik Kontrol Konferansı, Kayseri, Turkey, 12 - 14 September 2018
- III. ORB-SLAM and Inertial Sensor Fusion for GPS Denied Environments for Autonomous Car Localization
Kurt H. B., ALTUĞ E.
2018 International Automotive Technologies Conference (OTEKON), Bursa, Turkey, 7 - 08 May 2018
- IV. Acquiring 3D Point Cloud Data and Object Detection using 2D Laser Scanner (LIDAR) for Autonomous Vehicles
KAĞIZMAN A., ALTUĞ E.
2018 International Automotive Technologies Conference (OTEKON), Bursa, Turkey, 7 - 08 May 2018
- V. Development of an autonomous UAV platform for advanced research applications
Kurt H. B., Altuğ E.
2017 International Conference on Mechatronics Systems and Control Engineering, ICMSCE 2017, Kayseri, Turkey, 2 - 04 February 2017, pp.29-32
- VI. Localization of an autonomous personnel carrying vehicle in indoor environments
Altuğ E., Gelbal Ş. Y., KEÇECİ E. F., Gültekin M. K.
2017 International Conference on Mechatronics Systems and Control Engineering, ICMSCE 2017, Kayseri, Turkey, 2 - 04 February 2017, pp.38-41

- VII. **Design and HIL Setup of an Autonomous Vehicle for Crowded Environments**
Gelbar S. Y., Altuğ E., Kececi E. F.
IEEE International Conference on Advanced Intelligent Mechatronics (AIM), Banff, Canada, 12 - 15 July 2016,
pp.1370-1375
- VIII. **Manufacturing and Flight Tests of a Quadrotor UAS with Tiltable Rotors**
Senkul A. F., Genbal S. Y., Altuğ E.
International Conference on Unmanned Aircraft Systems (ICUAS), Virginia, United States Of America, 7 - 10 June
2016, pp.752-757
- IX. **Design of a Flapping-wing Aerial Vehicle based on four-bar mechanism**
İşbitirici A., Altuğ E.
International Conference on Unmanned Aircraft Systems (ICUAS), Virginia, United States Of America, 7 - 10 June
2016, pp.1240-1245
- X. **Uçan Robotlar için Yönlendirilebilir Rotor Sistemi Tasarımı ve Kontrolü**
ŞENKUL F., GELBAL Y., ALTUĞ E.
TÜRKİYE ROBOTBİLİM KONFERANSI, Turkey, 26 - 27 October 2015
- XI. **Dört Çubuk Mekanizması Kullanarak Mikro Hava Aracı İçin Kanat Mekanizması Tasarımı**
İşbitirici A., ALTUĞ E.
Uluslararası katılımlı 17. Makina Teorisi Sempozyumu, Turkey, 14 - 17 June 2015
- XII. **Implementation of Automatic Lift Axle System for Trucks with Mechanical Suspension**
KELEŞ T., ARAY A., ÖZDEMİR U., GÜVENÇ L., ALTUĞ E.
The third International Symposium on Innovative Technologies in Engineering and Science (ISITES), 3 - 05 June
2015
- XIII. **Adaptive Control of a Tilt - Roll Rotor Quadrotor UAV**
Senkul F., Altuğ E.
International Conference on Unmanned Aircraft Systems (ICUAS), Florida, United States Of America, 27 - 30 May
2014, pp.1132-1137
- XIV. **Development of Automatic Lift Axle System for Trucks with Mechanical Suspensions**
OSMAN UĞUR A., TAYLAN K., KOÇ Z., GÜNER KOÇ Ş., DURUŞ M., ALTUĞ E.
1st IFAC Workshop on Advances in Control and Automation Theory for Transportation Applications (2013), 16 -
17 September 2013
- XV. **Modeling and Control of a Novel Tilt - Roll Rotor Quadrotor UAV**
Senkul F., Altug E.
International Conference on Unmanned Aircraft Systems (ICUAS), Georgia, United States Of America, 28 - 31 May
2013, pp.1071-1076
- XVI. **Visual Attitude Stabilization of a Unmanned Helicopter in Unknown Environments with an Embedded Single-board Computer**
Yiğit C. B., Altuğ E.
10th IEEE International Symposium on Robotic and Sensors Environments (ROSE), Magdeburg, Germany, 16 - 18
November 2012, pp.49-54
- XVII. **Increasing Driving Safety with a Multiple Vehicle Detection and Tracking System using Ongoing Vehicle Shadow Information**
Aytekin B., Altuğ E.
IEEE International Conference on Systems, Man and Cybernetics, İstanbul, Turkey, 10 - 13 October 2010, pp.3650-
3656
- XVIII. **Vision-based Servo Control of a Quadrotor Air Vehicle**
Ceren Z., Altuğ E.
IEEE International Symposium on Computational Intelligence in Robotics and Automation, Daejeon, South Korea,
15 - 18 December 2009, pp.84-85
- XIX. **Design of a cheap tracked mobile robot for map building tasks**
DENİZER B., Altuğ E.
35th Annual Conference of the IEEE Industrial Electronics Society, IECON 2009, Porto, Portugal, 3 - 05 November

- 2009, pp.2199-2204
- XX. **Control of a Quadrotor Air Vehicle by Vanishing Points in Catadioptric Images**
METİN T., ALTUĞ E.
2009 INTERNATIONAL SYMPOSIUM ON OPTOMECHATRONIC TECHNOLOGIES, 21 - 23 September 2009, pp.92-97
- XXI. **Determining the Mass and Angular Position of the Unbalanced Load in Horizontal Washing Machines**
Yorukoglu A., Altug E.
IEEE/ASME International Conference on Advanced Intelligent Mechatronics, Singapore, Singapore, 14 - 17 July 2009, pp.118-119
- XXII. **Modeling and PD Control of a Quadrotor VTOL Vehicle**
Erginer B., ALTUĞ E.
2007 IEEE Intelligent Vehicles Symposium, Istanbul, Turkey, 13 - 15 June 2007
- XXIII. **Aricopter : Aerobotic platform for advances in flight, vision controls and distributed autonomy**
Karaman S., Aksugur M., Baltaci T., Bronz M., Kurtulus C., Inalhan G., Altug E., Guvenc L.
IEEE Intelligent Vehicles Symposium, İstanbul, Turkey, 13 - 15 June 2007, pp.1147-1148
- XXIV. **Control of a Tethered Aerial Platform for Acquiring Aerial Images**
ALTUĞ E.
MECHROB 2004 Mechatronics & Robotics Conference, 13 - 15 September 2004
- XXV. **Vision-based pose estimation and control of a model helicopter**
Altug E., Taylor C.
IEEE International Conference on Mechatronics (ICM 2004), İstanbul, Turkey, 3 - 05 June 2004, pp.316-321
- XXVI. **Quadrotor control using dual camera visual feedback**
ALTUĞ E., OSTROWSKI J. P., TAYLOR C.
2003 IEEE International Conference on Robotics and Automation (Cat. No.03CH37422), Taipei, Taiwan, 14 - 19 September 2003
- XXVII. **Control of a quadrotor helicopter using visual feedback**
Altug E., Ostrowski J., MAHONY R.
19th IEEE International Conference on Robotics and Automation (ICRA), Washington, Kiribati, 11 - 15 May 2002, pp.72-77

Supported Projects

- Altug E., Project Supported by Higher Education Institutions, Manufacturing and Flight Tests of a Quadrotor UAS with Tilttable Rotors, 2016 - 2018
- Altug E., Project Supported by Higher Education Institutions, Adaptive Control of a Tilt-Roll Rotor Quadrotor UAV, 2014 - 2018
- Altug E., Project Supported by Higher Education Institutions, Modeling and Control of a Novel Tilt-Roll Rotor Quadrotor UAV, 2013 - 2018
- Altug E., Project Supported by Higher Education Institutions, VİSUAL ATTİTUDE STABİLİZATİON OF A UNMANNED HELİCOPTER İN UNKNOWN ENVİRONMENTS WİTH AN EMBEDDED SİNGLE BOARD COMPUTER, 2012 - 2018
- Altug E., Project Supported by Higher Education Institutions, Image Based and Hybrid Visual Servo Control of an Unmanned Aerial Vehicle, 2011 - 2018
- Altug E., Project Supported by Higher Education Institutions, A CATADİOPTRİC AND PAN TİLT ZOOM CAMERA PAİR OBJECT TRACKİNG SYSTEM FOR UAVS, 2010 - 2018
- Altug E., Project Supported by Higher Education Institutions, DETERMİNİNG THE MASS AND ANGULAR POSİTİON OF THE UNBALANCED İN HORIZONTAL WASHİNG MACHİNES, 2009 - 2018
- Altug E., Project Supported by Higher Education Institutions, Kanat Çırparak Uçan Bir Mikro Hava Aracının Tasarımı ve Kontrolü, 2014 - 2015
- Altug E., Project Supported by Higher Education Institutions, Mikro Hava Araçlarının Bilinmeyen Ortamlarda Görüntü Temelli Kontrolü, 2010 - 2013

Activities in Scientific Journals

Journal of Intelligent & Robotic Systems , Editor, 2017 - Continues

Scientific Refereeing

International Journal of Micro Air Vehicles, SCI Journal, July 2017

Journal of Intelligent and Robotic Systems, SCI Journal, March 2017

International Journal of Control, Automation and Systems, SCI Journal, March 2017

Metrics

Publication: 53

Citation (WoS): 597

Citation (Scopus): 1014

H-Index (WoS): 10

H-Index (Scopus): 12

Congress and Symposium Activities

2017 International Conference on Mechatronics Systems and Control Engineering (ICMSCE 2017), Session Moderator, Kayseri, Turkey, 2017

Non Academic Experience

Pennsylvania Universitesi, ABD

Ortadoğu Teknik Üniversitesi