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Education Information

- I. Doctorate, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, Turkey 2017 - Continues
- II. Postgraduate, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, Turkey 2015 - 2017
- III. Undergraduate, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, Turkey 2011 - 2015

Foreign Languages

- I. English, C1 Advanced

Dissertations

- I. Postgraduate, A high accurate positioning and manipulation technique for untethered microrobots, Yıldız Teknik Üniversitesi, Faculty of Mechanical Engineering, Department of Mechatronics Engineering, 2017

Research Areas

Electrical and Electronics Engineering, Electromagnetic, Electric and Magnetic Fields, Engineering and Technology

Academic Titles / Tasks

- I. Lecturer, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, 2017 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Enhancing mechanical properties and surface quality of FDM-printed ABS: A comprehensive study on cold acetone vapor treatment**
Demircali A. A., Yilmaz D., Yilmaz A., Keskin O., Keshavarz M., ÜVET H.
International Journal of Advanced Manufacturing Technology, vol.130, no.7-8, pp.4027-4039, 2024 (SCI-Expanded)
- II. **Fiberbots: Robotic fibers for high-precision minimally invasive surgery**

Abdelaziz M. E. M. K., Zhao J., Gil Rosa B., Lee H., Simon D., Vyas K., Li B., Koguna H., Li Y., Demircali A. A., et al.
Science advances, vol.10, no.3, 2024 (SCI-Expanded)

III. **Longitudinal Motion Modeling and Experimental Verification of a Microrobot Subject to Liquid Laminar Flow**

Demircali A. A., Varol R., Aydemir G., Saruhan E. N., Erkan K., Üvet H.
IEEE-Asme Transactions On Mechatronics, vol.26, no.6, pp.2956-2966, 2021 (SCI-Expanded)

IV. **Mini Glider Design and Implementation with Wing-Folding Mechanism**

Demirçalı A. A., Üvet H.
APPLIED SCIENCES-BASEL, vol.8, 2018 (SCI-Expanded)

V. **Stabilization of Microrobot Motion Characteristics in Liquid Media**

DEMİRÇALI A. A., ÜVET H.
MICROMACHINES, vol.9, no.7, 2018 (SCI-Expanded)

VI. **Micro-UFO (Untethered Floating Object): A Highly Accurate Microrobot Manipulation Technique**

ÜVET H., DEMİRÇALI A. A., KAHRAMAN Y., Varol R., Köse T., ERKAN K.
MICROMACHINES, vol.9, no.3, 2018 (SCI-Expanded)

VII. **A Study on Finding Optimum Parameters of a Diamagnetically Driven Untethered Microrobot**

DEMİRCALİ A. A., ERKAN K., ÜVET H.
JOURNAL OF MAGNETICS, vol.22, no.4, pp.539-549, 2017 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

I. **Design of Flapping Wing Mini Air Vehicle with Crank-Rocker Mechanism**

Demirçalı A. A., Üvet H.
23rd International Conference on Mechatronics Technology – ICMT 2019, Salerno, Italy, 23 - 26 October 2019, vol.1, no.1, pp.1

II. **Indoor Drone Application with Acoustic Localization**

Demirçalı A. A., Üvet H.
THE 6TH INTERNATIONAL SYMPOSIUM ON ELECTRICAL AND ELECTRONICS ENGINEERING, Galati, Romania, 18 - 20 October 2019, vol.1, no.1, pp.1

III. **Digital Holography in Cancer Research**

Demirçalı A. A.
2nd International Cancer and Ion Channels Congress, İzmir, Turkey, 22 - 24 September 2019, pp.1-5

IV. **Pasif Diyamanyetik Levitasyon Kullanılarak Mikrorobotun Yanal Kuvvetlerinin Artırılması**

Demirçalı A. A., Erkan K., Üvet H.
OTOMATİK KONTROL TÜRK MİLLİ KOMİTESİ ULUSAL TOPLANTISI, Muğla, Turkey, 11 - 14 September 2019, pp.1-5

V. **Krank-Biyel Mekanizmalı Kanat Çırpan Mini Hava Aracı Tasarımı**

Sipahi M. A., Yılmaz A., Kaya A., Demirçalı A. A., Üvet H.
OTOMATİK KONTROL TÜRK MİLLİ KOMİTESİ ULUSAL TOPLANTISI, Muğla, Turkey, 11 - 14 September 2019, pp.1-5

VI. **Laminer Akış İçerisindeki Mikrorobotun Kontrolü**

Demirçalı A. A., Erkan K., Üvet H.
OTOMATİK KONTROL TÜRK MİLLİ KOMİTESİ ULUSAL TOPLANTISI, Muğla, Turkey, 11 - 14 September 2019, pp.1-5

VII. **MOTION CONTROL OF MICROROBOT IN LAMINAR FLOW**

Demirçalı A. A., Erkan K., Üvet H.
I. International Science and Innovation Congress, Denizli, Turkey, 26 - 29 August 2019, pp.1-5

VIII. **INCREASING LATERAL FORCE OF MICROROBOT USING PASSIVE DIAMAGNETIC LEVITATION**

Demirçalı A. A., Üvet H., Erkan K.
I. International Science and Innovation Congress, Denizli, Turkey, 26 - 29 August 2019, pp.1-5

IX. **Control of head-tilting angle of the diamagnetically levitated microrobot in liquid media**

DEMİRÇALI A. A., Yılmaz C. A., ÜVET H.

MARSS2018, Nagoya, Japan, 04 July 2018, pp.1-5

- X. **Mikro-Akışkan Kanal İçerisindeki Mikrorobotun Oryantasyon Kontrolü**
DEMİRÇALI A. A., Yılmaz A., ÜVET H.
TORK2018, İstanbul, Turkey, 12 April 2018, pp.65-69
- XI. **Mikro-Akışkan Kanal İçerisindeki Mikrorobotun Kontrolü**
DEMİRÇALI A. A., ÜVET H.
TOK, İstanbul, Turkey, 23 October 2017, pp.100
- XII. **Otonom Katlanabilir İnsansız Hava Aracının Geliştirilmesi**
DEMİRÇALI A. A., ÜVET H.
TOK, İstanbul, Turkey, 23 October 2017, pp.100
- XIII. **AN ALTERNATIVE APPROACH TO ALGORITHM ANALYSIS WITH HOLOGRAPHIC INTERFEROMETRY**
AYDIN S., DEMİRÇALI A. A., ÜVET H.
ISS 2017 2nd International Science Symposium "Science Festival", 5 - 08 September 2017
- XIV. **Analysis of Defects in Medical Implants by Holographic Interferometry Approach.**
ABALI B., DEMİRÇALI A. A., ÜVET H.
2nd International Science Symposium "Science Festival", 5 - 08 September 2017
- XV. **A HIGH ACCURATE POSITIONING AND MANIPULATION TECHNIQUE FOR UNTETHERED MICROROBOTS**
Demirçali A. A., Üvet H., Erkan K.
3rd International Conference on Engineering and Natural Science, Budapest, Hungary, 3 - 07 May 2017
- XVI. **HIGHLY PRICE MICRO-ROBOT MANIPULATION**
ÜVET H., DEMİRÇALI A. A., ERKAN K., KAHRAMAN Y., KÖSE T.
3rd INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, 3 - 07 May 2017
- XVII. **Mikrorobot Kolu Tasarimi, Üretimi, Uygulaması ve Nano Hassasiyette Konumlandırılması**
Sisu S., Karataş N., Köse T., DEMİRÇALI A. A., Üvet H.
NANOKON, İstanbul, Turkey, 10 April 2017, pp.100
- XVIII. **A STUDY OF UNMANNED GLIDER DESIGN, SIMULATION, AND MANUFACTURING**
Demircali A. A., ÜVET H.
International Conference of Central-Bohemia-University (CBUIC) - Innovations in Science and Education, Prague, Czech Republic, 22 - 24 March 2017, vol.5, pp.1064-1070
- XIX. **Algorithm Analysis with the Help of Holographic Interferometry**
AYDIN S., Demircali A. A., ÜVET H.
4th International Conference on Electrical and Electronic Engineering (ICEEE), Ankara, Turkey, 8 - 10 April 2017, pp.356-360
- XX. **The Observation of Imperfections in Medical Implants by Holographic Interferometry and the Comparisons of These Observations to Other Methods**
ABALI B., DEMİRÇALI A. A., ÜVET H.
4th International Conference on Electrical and Electronic Engineering (ICEEE), Ankara, Turkey, 8 - 10 April 2017, pp.351-355
- XXI. **PRECISE POSITIONING OF DIAMAGNETICALLY LEVITATED MICROROBOT**
Demircali A. A., ÜVET H., KAHRAMAN Y., Köse T., SİSU S., ERKAN K.
International Conference of Central-Bohemia-University (CBUIC) - Innovations in Science and Education, Prague, Czech Republic, 22 - 24 March 2017, vol.5, pp.1071-1077
- XXII. **Planör Tipi Katlanabilir İnsansız Hava Aracı**
Demirçali A. A., Üvet H.
TORK2016, İstanbul, Turkey, 2 - 03 November 2016, pp.1-5

Metrics

Publication: 32

Citation (WoS): 33

Citation (Scopus): 42

H-Index (WoS): 3

H-Index (Scopus): 3

Congress and Symposium Activities

- I. 2nd International Cancer and Ion Channels Congress, Invited Speaker, İzmir, Turkey, 2019

Awards

- I. Demirçalı A. A., Erkan K., Üvet H., Pasif Diyamanyetik Levitasyon Kullanılarak Mikrorobotun Yanal Kuvvetlerinin Artırılması, Otomatik Kontrol Türk Milli Komitesi, September 2019
- II. DEMİRÇALI A. A., Akışkan Kanal İçerisindeki Mikrorobotun Oryantasyon Kontrolü, Tork2018, April 2018
- III. DEMİRÇALI A. A., Mikro Akışkan Kanal İçerisindeki Mikrorobotun Kontrolü, TOK2017, September 2017

Coaching Duties

Refereeing Duties
