

## Assoc. Prof. Hüseyin ÜVET

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: ABA-3137-2020

ScopusID: 19640875600

Yoksis Researcher ID: 125475

### Education Information

Doctorate, Osaka University, Graduate School of Engineering Science, Department of Systems Innovation, Japan 2007 - 2010

Postgraduate, Osaka University, Graduate School of Engineering Science, Department of Systems Innovation, Japan 2004 - 2007

Undergraduate, Istanbul Kultur University, Faculty Of Engineering, Department Of Computer Engineering, Turkey 1999 - 2003

### Foreign Languages

English, C2 Mastery

### Research Areas

Sports Health Sciences, Robotics and Mechatronics Systems, Mechatronic Systems, Micro and Nano Robots, Artificial Intelligence, Computer Learning and Pattern Recognition, Bioinstrumentation and Microelectromechanical Systems (MEMS)

### Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, 2011 - Continues

Research Assistant PhD, Nagoya University, Mechanical Science & Engineering, Mikro Nano Systems Engineering, 2010 - 2011

### Academic and Administrative Experience

Deputy Head of Department, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics

Engineering, 2017 - 2018

Director of the Center, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, 2014 - 2016

Deputy Director of the Center, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechatronics Engineering, 2012 - 2014

## Courses

Robotik Görme, Postgraduate, 2017 - 2018

Nesneye Yönelik Programlama, Undergraduate, 2017 - 2018

Mikro-Nano Mekatronik, Postgraduate, 2015 - 2016

Sensors and Actuators, Postgraduate, 2014 - 2015

## Advising Theses

Üvet H., Microfluidic system development for detection of single-cell mechanical properties, Postgraduate, G.AYDEMİR(Student), 2020

Üvet H., Semi - autonomous warehouse counting system, Postgraduate, G.MELİKE(Student), 2020

Üvet H., Havalı süspansiyonlu ağır ticari araçlar için yükseklik kontrol sistemi yazılımı geliştirilmesi ve devreye alınması, Postgraduate, C.ŞAHBAZ(Student), 2019

Üvet H., A high accurate positioning and manipulation technique for untethered microrobots, Postgraduate, A.Anıl(Student), 2017

Üvet H., Hidrodinamik kavitasyona dayalı medikal uygulamalar için bir mikromanipülatör tasarımı ve geliştirilmesi, Postgraduate, C.Sözer(Student), 2017

ÜVET H., Mikro-robot kolu dizaynı, üretimi ve görsel geri besleme ile temassız manipülasyonu, Postgraduate, A.İlginoğlu(Student), 2016

## Research Infrastructure Information

Üvet H., Koyun A., Tüfekci C. S., BİLİM VE TEKNOLOJİ UYGULAMA VE ARAŞTIRMA MERKEZİ, February 2011

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Development of Graphene Oxide-Based Anticancer Drug Combination Functionalized with Folic Acid as Nanocarrier for Targeted Delivery of Methotrexate**  
Yanikoglu R., Karakas C. Y., Ciftci F., İNSEL M. A., Karavelioglu Z., Varol R., Yilmaz A., ÇAKIR R., ÜVET H., ÜSTÜNDAĞ C. B.  
Pharmaceutics, vol.16, no.6, 2024 (SCI-Expanded)
- II. **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)
- III. **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)
- IV. **Classification of 3D shoe prints using the PointNet architecture: proof of concept investigation of binary classification of nike and adidas outsoles**

Oğuz R., Babacan H. H., AŞICIOĞLU F., ÜVET H.

Forensic Science, Medicine, and Pathology, 2024 (SCI-Expanded)

- V. **On the application of hydrodynamic cavitation on a chip in cellular injury and drug delivery**  
Namli I., Karavelioglu Z., Sarraf S. S., Aghdam A. S., Varol R., Yilmaz A., Sahin S. B., Ozogul B., Bozkaya D. N., Acar H. F., et al.  
Lab on a Chip, vol.23, no.11, pp.2640-2653, 2023 (SCI-Expanded)
- VI. **Machine Learning Approach on High Risk Treadmill Exercise Test to Predict Obstructive Coronary Artery Disease by using P, QRS, and T waves' Features**  
Yilmaz A., Hayiroğlu M. İ., Salturk S., Pay L., Demircali A. A., Coşkun C., Varol R., Tezen O., Eren S., Çetin T., et al.  
Current Problems in Cardiology, vol.48, no.2, 2023 (SCI-Expanded)
- VII. **An Automatized Deep Segmentation and Classification Model for Lumbar Disk Degeneration and Clarification of Its Impact on Clinical Decisions**  
Soydan Z., Bayramoglu E., Karasu R., Sayin I., Saltürk S., Üvet H.  
Global Spine Journal, 2023 (SCI-Expanded)
- VIII. **Microfluidic wound scratching platform based on an untethered microrobot with magnetic actuation**  
Yilmaz A., Karavelioglu Z., Aydemir G., Demircali A. A., Varol R., Kosar A., ÜVET H.  
Sensors and Actuators B: Chemical, vol.373, 2022 (SCI-Expanded)
- IX. **Deep convolutional neural networks for onychomycosis detection using microscopic images with KOH examination**  
Yilmaz A., Goktay F., Varol R., Gencoglan G., ÜVET H.  
MYCOSES, vol.65, no.12, pp.1119-1126, 2022 (SCI-Expanded)
- X. **Acousto-holographic reconstruction of whole-cell stiffness maps**  
Üvet H.  
NATURE COMMUNICATIONS, vol.13, no.7351, pp.1-10, 2022 (SCI-Expanded)
- XI. **MobileSkin: Classification of Skin Lesion Images Acquired Using Mobile Phone-Attached Hand-Held Dermoscopes**  
Yilmaz A., Gencoglan G., Varol R., Demircali A. A., Keshavarz M., ÜVET H.  
Journal of Clinical Medicine, vol.11, no.17, 2022 (SCI-Expanded)
- XII. **A Flexible Cystoscope Based on Hydrodynamic Cavitation for Tumor Tissue Ablation.**  
Abbasiasl T., Sutova H. E., Niazi S., Celebi G., Karavelioglu Z., Kirabali U. G., Yilmaz A., Uvet H., Kutlu O., Ekici S., et al.  
IEEE transactions on bio-medical engineering, vol.69, pp.513-524, 2022 (SCI-Expanded)
- XIII. **Untethered MicroRobot Motion Mechanism with Increased Longitudinal Force**  
Demirçalı A. A., Varol R., Erkan K., Üvet H.  
Journal of Mechanisms and Robotics-Transactions of the ASME, vol.13, no.6, pp.1-9, 2021 (SCI-Expanded)
- XIV. **Local Carpet Bombardment of Immobilized Cancer Cells with Hydrodynamic Cavitation**  
Gevari M. T., Aydemir G., Kutlu Ö., Üvet H., Ghorbani M., Koşar A.  
IEEE Access, vol.21, pp.1-9, 2021 (SCI-Expanded)
- XV. **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., Uvet H.  
IEEE-Asme Transactions On Mechatronics, vol.26, no.6, pp.2956-2966, 2021 (SCI-Expanded)
- XVI. **Interferometric Measurement of TGF-β Induced Epithelial-Mesenchymal Transition of Tumor Cells**  
Varol R., Esmer G. B., Uvet H.  
APPLIED SCIENCES-BASEL, vol.10, no.24, pp.9107-9117, 2020 (SCI-Expanded)
- XVII. **Holographic Imaging of Cell Proliferation**  
Varol R., Aydemir G., Karadağ A., Meço E., Ömeroğlu S., Oruç M. E., Başpınar Y., Esmer G. B., Üvet H.  
TURKISH JOURNAL OF BIOCHEMISTRY-TURK BIYOKIMYA DERGISI, vol.44, no.6, pp.1-2, 2019 (SCI-Expanded)
- XVIII. **Design and implementation of a passive micro flow sensor based on diamagnetic levitation**  
Aydemir G., Kosar A., Üvet H.  
SENSORS AND ACTUATORS A-PHYSICAL, vol.300, 2019 (SCI-Expanded)
- XIX. **Detailed Magnetic Force Analysis of A 4-Pole Hybrid Electromagnet by Magnetic Equivalent Circuit**

## Method

Ertugrul H. F., ERKAN K., ÜVET H.

JOURNAL OF MAGNETICS, vol.23, no.4, pp.499-508, 2018 (SCI-Expanded)

- XX. **Mini Glider Design and Implementation with Wing-Folding Mechanism**  
Demirçalı A. A., Üvet H.  
APPLIED SCIENCES-BASEL, vol.8, 2018 (SCI-Expanded)
- XXI. **Stabilization of Microrobot Motion Characteristics in Liquid Media**  
DEMİRÇALI A. A., ÜVET H.  
MICROMACHINES, vol.9, no.7, 2018 (SCI-Expanded)
- XXII. **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)
- XXIII. **Biomedical device prototype based on small scale hydrodynamic cavitation**  
Ghorbani M., Sözer C., Alcan G., Unel M., Ekici S., ÜVET H., Kosar A.  
AIP ADVANCES, vol.8, no.3, 2018 (SCI-Expanded)
- XXIV. **A Study on Finding Optimum Parameters of a Diamagnetically Driven Untethered Microrobot**  
DEMİRÇALI A. A., ERKAN K., ÜVET H.  
JOURNAL OF MAGNETICS, vol.22, no.4, pp.539-549, 2017 (SCI-Expanded)
- XXV. **Visualization of microscale cavitating flow regimes via particle shadow sizing imaging and vision based estimation of the cone angle**  
Ghorbani M., Alcan G., Unel M., Gozuacik D., Ekici S., ÜVET H., Sabanovic A., Kosar A.  
EXPERIMENTAL THERMAL AND FLUID SCIENCE, vol.78, pp.322-333, 2016 (SCI-Expanded)
- XXVI. **Magnetic levitation control of a three degrees of freedom 4-pole hybrid electromagnet**  
ERTUĞRUL H. F., ERKAN K., ÜVET H.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.31, no.3, pp.632-645, 2016 (SCI-Expanded)
- XXVII. **Multi-view fast object detection by using extended haar filters in uncontrolled environments**  
Vural S., Mae Y., Uvet H., Arai T.  
PATTERN RECOGNITION LETTERS, vol.33, no.2, pp.126-133, 2012 (SCI-Expanded)
- XXVIII. **Vision-Based Automated Single-Cell Loading and Supply System**  
Uvet H., Hasegawa A., Ohara K., Takubo T., Mae Y., Arai T.  
IEEE TRANSACTIONS ON NANOBIOSCIENCE, vol.8, no.4, pp.332-340, 2009 (SCI-Expanded)
- XXIX. **Miniaturized Vision System for Microfluidic Devices**  
Uvet H., Arai T., Mae Y., Takubo T., Yamada M.  
ADVANCED ROBOTICS, vol.22, no.11, pp.1207-1222, 2008 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Recent advances in health biotechnology during pandemic**  
Arı Yuka S., Akpek A., Özarıslan A., Vural A., Koçer A. T., Aslan A., Karaaltın A. B., Gök B., Yılmaz B. B., İnan B., et al.  
Sigma Journal of Engineering and Natural Sciences, vol.41, no.3, pp.625-655, 2023 (ESCI)
- II. **An innovative tailored instructional design for computer programming courses in engineering**  
Adorno D. P., Uğraş T., Quaicoe J. S., Jecheva V., Ogunyemi A. A., Bauters M., Toshkov A., Ortakci Y., Ozacar K., Atasoy F., et al.  
U.Porto Journal of Engineering, vol.9, no.3, pp.209-222, 2023 (Scopus)
- III. **Study on the Concept and Development of a Mobile Incubator**  
Ay F. C., Bilici N., Varol R., Yılmaz A., Kirabali U. G., Yılmaz A., Üvet H.  
Arxiv, vol.1, pp.1-4, 2022 (Non Peer-Reviewed Journal)
- IV. **Benchmarking of Lightweight Deep Learning Architectures for Skin Cancer Classification using ISIC 2017 Dataset**

- Üvet H.  
arXiv preprint, vol.1, no.1, pp.1-2, 2021 (Non Peer-Reviewed Journal)
- V. **The Effect of Pore Structure in Flapping Wings on Flight Performance**  
Üvet H.  
arXiv preprint, vol.1, no.1, pp.1-2, 2021 (Non Peer-Reviewed Journal)
- VI. **Comparison of Deep Learning and Traditional Machine Learning Techniques for Classification of Pap Smear Images**  
Üvet H.  
arXiv preprint, vol.1, no.1, pp.1-2, 2020 (Non Peer-Reviewed Journal)
- VII. **Optimization of Different Surface Modifications for Binding of Tumor Cells in Microfluidic Systems**  
**10.30621/jbachs.2019.601**  
Meco H. E., Karadag A., Omeroglu S., Kocal G. C., Oruc M. E., Üvet H., Basbinar Y.  
JOURNAL OF BASIC AND CLINICAL HEALTH SCIENCES, vol.3, pp.73-77, 2019 (Peer-Reviewed Journal)
- VIII. **HİDRODİNAMİK KAVİTASYONA DAYALI BİYOMEDİKAL UYGULAMALAR İÇİN SİSTOSKOP TABANLI MİKROMANİPÜLATÖR TASARIMI VE GELİŞTİRİLMESİ**  
Sözer C., Üvet H.  
Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.8, pp.593-601, 2019 (Peer-Reviewed Journal)
- IX. **Automatic Single-Cell Transfer Module**  
ÜVET H., HASEGAWA A., OHARA K., TAKUBO T., MAE Y., ARAI T.  
BIOLOGICALLY INSPIRED ROBOTICS, pp.125-145, 2012 (Peer-Reviewed Journal)
- X. **Illumination Normalization for Outdoor Face Recognition by Using Ayofa-filters**  
Vural S., Mae Y., Üvet H., Arai T.  
Journal of Pattern Recognition Research, vol.6, no.2, pp.1-18, 2011 (ESCI)

## Books & Book Chapters

- I. **Automatic Single Cell Transfer Module**  
ÜVET H., HASEGAWA A., OHARA K., TOMIHITO T., MAE Y., TATSUO A.  
in: Biologically Inspired Robotics, Yunhui Liu, Dong Sun, Editor, CRC PRESS, New-York, pp.125-147, 2011

## Refereed Congress / Symposium Publications in Proceedings

- I. **A Study on Tennis Ball Ground Impact Point Detection**  
Sarılioğlu O., Balci İ. C., Sayın İ., Çiçek B., Saltürk S., Üvet H.  
2024 11th International Conference on Electrical and Electronics Engineering (ICEEE), Muğla, Turkey, 22 April 2024, pp.377-381
- II. **Heart Rate-Based Prediction of Daily Activity Levels Using Wearable Devices for Home Rehabilitation Process of Cardiac Patients**  
SALTÜRK S., ÜVET H., BARMAN H. A., SAYIN İ., BALCI İ. C.  
2024 11th International Conference on Electrical and Electronics Engineering (ICEEE), Muğla, Turkey, 22 - 24 April 2024
- III. **Online/Hybrid Course Design for Programming Languages in Engineering Education**  
Üvet H., Uğraş T., Quaicoe J. S., Ogunyemi A. A., Bauters M., Jecheva V., Toshkov A., Persano Adorno D., Peri D., Ortakci Y., et al.  
4th International Conference on Higher Education Learning Methodologies and Technologies Online, HELMeTO 2022, Palermo, Italy, 21 - 23 September 2022, vol.1779 CCIS, pp.433-445
- IV. **Determination of Cell Stiffness Using Polymer Micro Beads as Reference**  
Ömeroğlu S., Varol R., Karavelioğlu Z., Karadağ A., Başbinar Y., Oruç M. E., Üvet H.  
Medical Technologies Congress 2020, 19 - 20 November 2020, pp.1-4

- V. **Interferometric Investigation of Cell Stiffness and Morphology on Oxidative Stress-Induced Human Umbilical Vein Endothelial Cells (HUVEC)**  
Karavelioğlu Z., Ömeroğlu S., Varol R., Meço E., Buyrukbilen Y., Başbınar Y., Oruç M. E., Üvet H.  
Medical Technologies Congress 2020, 19 - 20 November 2020
- VI. **Use of Velocity Vectors for Cell Classification Under Acoustic Drifting Forces**  
Varol R., Ömeroğlu S., Karavelioğlu Z., Kumuk E., Saruhan E., Aydemir G., Oruç M. E., Üvet H.  
Medical Technologies Congress 2020, 19 - 20 November 2020, pp.1-5
- VII. **A New Method for Creating a Wound Model with Micro-robot in Microfluidic Device**  
Aydemir G., Varol R., Tarar C., Ömeroğlu S., Ustomar E. O., Gül B. E., Üvet H.  
International Conference on Manipulation, Automation and Robotics at Small Scales, 13 - 16 July 2020, pp.1-6
- VIII. **Classification Of Cells Based on Their Drifting Velocity Under Acoustic Radiation Pressure**  
Varol R., Saruhan E. N., Orucu Z., Karavelioğlu Z., Aydemir G., Başbınar Y., Üvet H.  
International Conference on Manipulation, Automation and Robotics at Small Scales, 13 - 16 July 2020, pp.1-5
- IX. **Manipulation of Cell Cultures by Means of Holographic Visual Feedback**  
Varol R., Aydemir G., Kamlı B. G., Ömeroğlu S., Demircali A., Karavelioğlu Z., Başbınar Y., Üvet H.  
International Conference on Manipulation, Automation and Robotics at Small Scales, 13 - 16 July 2020, pp.1-5
- X. **Interferometric Measurement of Refractive Index Change of Tumor Cells Under Electrical Fields**  
Varol R., Ömeroğlu S., Yılmaz A., Oruç M. E., Esmer G. B., Üvet H.  
Digital Holography and Three-Dimensional Imaging, 22 - 26 June 2020, pp.42-44
- XI. **Measurement of Mechanical Response of Cell Membrane to High-Frequency Periodic Stimuli**  
Varol R., Ömeroğlu S., Demircali A., ÜVET H., ESMER G. B.  
Digital Holography and Three-Dimensional Imaging, 22 - 26 June 2020
- XII. **Holographic imaging of tumor cells during epithelial-mesenchymal transition**  
Varol R., Esmer G. B., Efe O., Ömeroğlu S., Aydemir G., Karadağ A., Meço E., Oruç M. E., Başbınar Y., Üvet H.  
Photonics Europe 2020, 6 - 08 April 2020
- XIII. **Immobilization of CTCs on Silane-Modified Surfaces**  
Ömeroğlu S., Meço E., Karadağ A., Aydemir G., Varol R., ORUÇ M. E., BAŞBINAR Y., ESMER G. B., ÜVET H.  
2nd International Cancer Ion Channels Congress, İzmir, Turkey, 22 - 24 September 2019
- XIV. **Holographic Imaging of Cancer Cell Proliferation**  
Ömeroğlu S., Meço E., Karadağ A., Aydemir G., Varol R., ORUÇ M. E., BAŞBINAR Y., ESMER G. B., ÜVET H.  
2nd International Cancer Ion Channels Congress, İzmir, Turkey, 22 - 24 September 2019
- XV. **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
- XVI. **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
- XVII. **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
- XVIII. **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
- XIX. **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
- XX. **An Introduction to LOC Devices**  
ÜVET H.  
2nd International Cancer Ion Channels Congress, İzmir, Turkey, 22 - 24 September 2019

- XXI. **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
- XXII. **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
- XXIII. **A study on the development of semi automated warehouse stock counting system**  
Cidal G. M., Ayhan Cimbeç Y., Karahan G., Emre Boler O., Ozkardesler O., ÜVET H.  
6th International Conference on Electrical and Electronics Engineering, ICEEE 2019, İstanbul, Turkey, 16 - 17 April 2019, pp.323-326
- XXIV. **HAVALI SÜSPANSİYONLU AĞIR TİCARİ ARAÇLAR İÇİN YÜKSEKLİK KONTROL SİSTEMİ GELİŞTİRME ÇALIŞMASI**  
ŞAHBAZ C., KELEŞ T., EMRE EMİRHAN S., GÖRÜRGÖZ M., ÜVET H.  
OTEKON 2018, the International Conference on Automotive Technologies, 7 - 08 May 2018, pp.720-730
- XXV. **A Study on Micro Flow Sensor Using Diamagnetic Levitation**  
AYDEMİR G., ÇALIŞ B., ERKAN K., ÜVET H.  
MARSS, the annual International Conference on Manipulation, Automation and Robotics at Small Scales, Nagoya, Japan, 4 - 08 June 2018
- XXVI. **Micro-Flow Sensor Design and Implementation Based on Diamagnetic Levitation**  
AYDEMİR G., ÖZER C., ÜVET H.  
CEIT 2018 (International Conference on Control Engineering and Information Technology), Turkey, 25 - 27 October 2018
- XXVII. **Mikro/Nano Robotik'in Medikal Teknolojilerinde Uygulamaları**  
ÜVET H.  
1. Temel Onkoloji Sempozyumu, Turkey, 9 - 11 May 2018
- XXVIII. **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
- XXIX. **Mikro-Akışkan Kanal İçerisindeki Mikrorobotun Oryantasyon Kontrolü**  
DEMİRÇALI A. A., Yılmaz A., ÜVET H.  
TORK2018, İstanbul, Turkey, 12 April 2018, pp.65-69
- XXX. **Mikro-Akışkan Kanal İçerisindeki Mikrorobotun Kontrolü**  
DEMİRÇALI A. A., ÜVET H.  
TOK, İstanbul, Turkey, 23 October 2017, pp.100
- XXXI. **Otonom Katlanabilir İnsansız Hava Aracının Geliştirilmesi**  
DEMİRÇALI A. A., ÜVET H.  
TOK, İstanbul, Turkey, 23 October 2017, pp.100
- XXXII. **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
- XXXIII. **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
- XXXIV. **Highly Price Micro-Robot Manipulation Tehcniques for Lab-on-a-chip Systems**  
ÜVET H., DEMİRÇALI A., Köse T., KAHRAMAN Y., ERKAN K.  
The 3rd International Conference on Engineering and Natural Sciences (ICENS), 3 - 07 May 2017
- XXXV. **A new design concept of magnetically levitated 4 pole hybrid mover driven by linear motor**  
BUCAK M., Bozkurt A. F., ERKAN K., Uvet H.  
2017 IEEE International Conference on Robotics and Automation, ICRA 2017, Singapore, Singapore, 29 May - 03 June 2017, pp.596-601
- XXXVI. **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
- XXXVII. **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
- XXXVIII. **Untethered Microrobotic Arm Design**  
ÜVET H.  
ICEEE 2017 International Conference on Electrical and Electronics Engineering, 8 - 10 April 2017
- XXXIX. **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
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- LVI. **Development of On-chip Automatic Cell Sensing and Ejection System**  
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- LVII. **On-chip Somatic Cell Coupling and Fusion**  
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International Symposium on Flexible Automation (ISFA 2010), 01 July 2010
- LVIII. **Individual Automated Cell Transportation for Microfluidic Applications**  
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ÜVET H.  
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 2008 IEEE International Conference on Robotics and Automation, ICRA 2008, Pasadena, CA, United States Of America, 19 - 23 May 2008, pp.3106-3111
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 IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS 2007), 01 January 2007
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- LXXIII. The Novel, Compact, Portable PDMS Microfluidic Chip Design with Vision System for Single Cell Analysis and Manipulation**  
 ÜVET H.  
 The Robotics and Mechatronics Conference (ROBOMECH 2006), 01 July 2006
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 OKUR B., ERKAN K., ÜVET H.  
 International Advanced Technologies Symposium (IATS - 2013)

## Supported Projects

ERKMEN B., ACAR VURAL R., Sarı Ö. A., ÜVET H., ERKAN K., ŞAHİN O., BARMAN H., ERMAN E. F., Project Supported by Higher Education Institutions, Okçuluk Sporunda Atletik Performansın Değerlendirilmesine Yönelik Yapay Zeka Destekli Sensörlü Biyomekanik Hareket Analizi, 2024 - Continues

ŞAHİN O., KAYIRAN A., DEMİRÇALI A. A., ÜVET H., Project Supported by Higher Education Institutions, Gözün Biyomekanik ve Optik Sanal İkinin Geliştirilmesi, 2023 - Continues

Üvet H., Başbınar Y., Esmir G. B., Strategic R&D Project of Group D, Acousto-Holographic Imaging Device for Measuring Cell Stiffness in the In Vitro Diagnosis of Colorectal Cancer, 2025 - 2028

Üvet H., Erkan K., Çakır R., TÜBİTAK Project, Measurement of Cell and Spheroid Stiffness Using Magnetic Nanoparticles, 2024 - 2027

Üvet H., Uğraş T., Temel T., Horizon Europe Project, Culturhythmics: Global Beats in Sports Training, 2024 - 2026

Üvet H., TÜBİTAK Project, FutbolAI: Football Palyer Evaluation and Reporting Program with Artificial Intelligence, 2024 -

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Saltürk S., Barman H. A., Üvet H., Doğan S. M., TÜBİTAK Project, Doktorun gözü: Giyilebilir kalp - akciğer takip cihazı, 2023 - 2025

ÜVET H., ERKAN K., ŞAHİN O., GÜVEN R., KIRABALI U. G., Project Supported by Higher Education Institutions, Süper Paramanyetik Demir Oksit Nanoparçacık(SPION) Hedeflemeli Derin Doku Foto-Akustik Mikroskopi, 2023 - 2024

Üvet H., Ünal S., UĞRAŞ T., Erasmus Project, Save Life: Reorganizing Basic/Advanced Life Support Training Through the Use of Innovative Digital Materials, 2022 - 2024

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ÜVET H., ÖZDEMİR Ş. K., ÇAKIR KOÇ R., KIRABALI U. G., GENÇOĞLAN G., Project Supported by Higher Education Institutions, Yüksek Frekanslı Optik Cımbızlama Kullanılarak Kansersiz Hücrelerin Tespiti ve Sınıflandırılması, 2022 - 2024

Saltürk S., Üvet H., TÜBİTAK Project, Teniste Yapay Zeka Destekli Sanal Spor Koçu, 2022 - 2024

Üvet H., Özkan I., H2020 Project, iCare4NextG, 2021 - 2024

Kirabali G., Üvet H., TÜBİTAK Project, Development of Holotomographic Microscope and Micromanipulator System for Assisted Reproductive Technologies -, 2022 - 2023

Üvet H., Uğraş T., Erasmus Project, Redesigning Introductory Computer Programming Using Innovative Online Modules, 2021 - 2023

Edali M., Aydın N., Özkaya B., Hacı M., Özügül M. D., Demir Ö., Saraçoğlu A., Bakırman T., Alp S., Şeker Ş., et al., Ministry of Transport, Sürdürülebilir ve Akıllı Hareketlilik Stratejisi ve Eylem Planının Oluşturulması, 2021 - 2023

Üvet H., Kirabali U. G., TÜBİTAK Project, Medikal Alanda Kullanılmak Üzere Lenssiz Holografik Tomogram Geliştirilmesi, 2021 - 2022

Üvet H., Keskin O., TÜBİTAK Project, Plastik Malzemelerin Yüzey Kalitesini Arttırmak İçin Yüzey Aşındırma Cihazı, 2019 - 2021

Üvet H., Oruç M. E., TÜBİTAK Project, Dolaşımdaki Kansersiz Hücrelerin (Ctcs) Mekanik Sertlik (Cell Stiffness) Yapısındaki Değişimini Ölçen Tek Hücre Görüntüleme Tekniği, 2017 - 2020

Üvet H., Erkan K., TÜBİTAK Project, Mikro-Robot Kolu Dizaynı, Üretimi Ve Görsel Geri Besleme İle Temassız Manipülasyonu, 2014 - 2018

Akdoğan E., Livatyali H., Üvet H., Ömürlü V. E., TÜBİTAK Project, Yıldız Technical University R & D Strategy Document (Mechatronics) - 1000-Support Program for Increasing Research and Development Potential of Universities, 2016 - 2017

Üvet H., Development Agency, Hologram Araştırmaları ve Eğitimi Laboratuvarı, 2015 - 2016

Üvet H., Koşar A., TÜBİTAK Project, Hidrodinamik Kaviteye Dayanan Medikal Uygulamalar İçin Kullanılacak Ulusal Endoskopik Cihaz Tasarımı ve Geliştirilmesi, 2013 - 2016

Üvet H., Erkan K., TÜBİTAK Project, Design and Visual Feedback Position Control of Flexible Conveyance System Based on Electromagnetic Suspension System Driven by Planar Linear Motor, 2012 - 2015

Üvet H., Hazar A. B., Project Supported by Higher Education Institutions, Süperkritik Akışkan Ekstraksiyonu Yöntemi ile Mikrokapsül Üretimi, 2012 - 2012

## Patent

Üvet H., ELEKTRİK DİPOL ALAN İLE SAÇILIM KONTROLLÜ AKTİF DİELEKTRİK NANOREZONATÖR, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Recourse Number: PCT/TR2022/050055 , Standard Registration, 2022

Üvet H., Hücre ve mikro organizmaların ışık geçirgenliğine göre ayırabilen elektro-holografik mikroskop sistemi, Patent, CHAPTER H Electricity, The Invention Recourse Number: 2020/19536 , Standard Registration, 2020

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Üvet H., Akustik Modül İçeren Bir Dijital Hologram Görüntüleme Cihazı, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Recourse Number: 2020/20477 , Standard Registration, 2020

Erkan K., Üvet H., BİR KARMA ELEKTROMİKNATIS DÜZENEĞİ VE BU DÜZENEĞİN KULLANILDIĞI BİR TEMASSIZ TAŞIMA SİSTEMİ, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Registration Number: 2016 20306 , Standard Registration, 2020

Üvet H., TEMASSIZ TAŞIMA SİSTEMİ, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Recourse Number: 2019/10205 , Standard Registration, 2019

Erkan K., ÜVET H., MİKRO ROBOT SİSTEMİ, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Registration Number: 2015 16147 , Standard Registration, 2018

Üvet H., Kanat Çırpan Hava Araçları İçin Geliştirilmiş Kanat Çırpa Mekanizması, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Recourse Number: 2017/23485 , Standard Registration, 2017

## Scientific Refereeing

Vision-based Shape and Motion Analysis of Cells Fast-flowing in a Microchannel, SCI Journal, June 2013

Improved Laser Manipulation for On-chip Fabricated Microstructures based on Solution Replacement and Its Application in Single Cell Analysis, SCI Journal, April 2013

## Metrics

Publication: 120  
Citation (WoS): 108  
Citation (Scopus): 209  
H-Index (WoS): 6  
H-Index (Scopus): 9

## Invited Talks

An Introduction to LOC Devices, Conference, Dokuz Eylül Üniversitesi, Turkey, September 2019

2019 6th International Conference On Electrical And Electronics Engineering (ICEEE 2019), Conference, Gazi Üniversitesi, Turkey, April 2019

1. Basic Oncology Symposium, Workshop, Dokuz Eylül Üniversitesi, Turkey, May 2018

2017 4th International Conference on Electrical and Electronics Engineering (ICEEE2017), Conference, Gazi Üniversitesi, Turkey, April 2017

International Conference on Electrical and Electronics Engineering (ICEEE 2015) /Micro-Nano Robotics Technologies, Conference, American Society for Research, Turkey, April 2015

## Scholarships

MEXT Scholarship, Official Institutions of Foreign Countries, 2004 - 2009

## Awards

Demirçalı A. A., Erkan K., Üvet H., Pasif Diyamanyetik Levitasyon Kullanılarak Mikrorobotun Yanal Kuvvetlerinin Artırılması, Otomatik Kontrol Türk Milli Komitesi, September 2019  
Üvet H., Aydemir G., Karadağ A., Ömeroğlu S., Oruç M. E., Başbınar Y., Esmer G. B., Tailor of Science Reward, 2Nd International Cancer & Ion Channels Congress , September 2019  
Üvet H., Yeni Nesil Uçan Araç Teknolojisi, Tet Ar-Ge Proje Pazarı, October 2018  
Üvet H., En İyi Makale Ödülü , Tork 2018 (Turkey Robotics Science Conference), September 2018  
Üvet H., En İyi Makale Ödülü, Tok 2017 (Turkey Automatic Control Conference), November 2017  
Üvet H., Elginkan Vakfı Teknoloji Ödülü, Elginkan Vakfı, April 2016  
Üvet H., En İyi Makale Ödülü, 5. Ulusal Nanoteknoloji Kongresi, February 2015  
Üvet H., En İyi Makale Ödülü, Ieee International Conference On Robotics And Biomimetic 2009, June 2009

## **Non Academic Experience**

BİLİM SANAYİ VE TEKNOLOJİ BAKANLIĞI  
TÜBİTAK  
TÜBİTAK  
BİLİM SANAYİ VE TEKNOLOJİ BAKANLIĞI  
DHL Lojistik  
Turk Hava Yolları