

## Assoc. Prof. KUTAY İÇÖZ

### Personal Information

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### Education Information

Post Doctorate, Harvard University, Medical School, Neurosurgery, United States Of America 2010 - 2011

Doctorate, Purdue University, College Of Engineering, Biomedical Engineering, United States Of America 2005 - 2010

Post Graduate, Ohio State University, College Of Engineering, Electrical Engineering, United States Of America 2003 - 2004

Under Graduate, İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği, Turkey 1998 - 2002

### Foreign Languages

English, C1 Advanced

### Certificates, Courses and Trainings

Quality Management, Lean 6 Sigma, Intel, 2012

### Dissertations

Doctorate, Immunomagnetic Bead Assisted Nanomechanical Biosensor, Purdue University, 2010

### Research Areas

Health Sciences, Medicine, Fundamental Medical Sciences, Microbiology and Clinical Microbiology, Immunology, Biomedical Engineering, Bioengineering and MEMS, Bioinstrumentation and Microelectromechanical Systems (MEMS), Electrical and Electronics Engineering, Electronic, Printed Circuits, Thin Film, Thick Film and Hybrid ICs, Circuit Theory, Sensing Devices and Transducers, Electronic Circuits, Nanotechnology, MEMS, Magnetic Materials and Devices, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Abdullah Gül Üniversitesi, Mühendislik Fakültesi, Elektrik Ve Elektronik Mühendisliği, 2018 - Continues

Assistant Professor, Abdullah Gül Üniversitesi, Mühendislik Fakültesi, Elektrik Ve Elektronik Mühendisliği, 2014 - 2018

### Professional Experience

## Advising Theses

İÇÖZ K., Improving Sensitivity of Biosensors By Using Micro/Nano Magnetic Particles, Post Graduate, O.Mzava(Student), 2016

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Microfluidic Chip based direct triple antibody immunoassay for monitoring patient comparative response to leukemia treatment**  
İÇÖZ K., Akar U., ÜNAL E.  
BIOMEDICAL MICRODEVICES, vol.22, 2020 (Journal Indexed in SCI)
- **Image-analysis based readout method for biochip: Automated quantification of immunomagnetic beads, micropads and patient leukemia cell**  
Uslu F., İÇÖZ K., TAŞDEMİR K., DOĞAN R. S. , YILMAZ B.  
MICRON, vol.133, 2020 (Journal Indexed in SCI)
- **Feedback controller designs for an electromagnetic micromanipulator**  
Boyuk M., Eroglu Y., ABLAY G., İÇÖZ K.  
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART I-JOURNAL OF SYSTEMS AND CONTROL ENGINEERING, 2019 (Journal Indexed in SCI)
- **Design, modeling, and control of a horizontal magnetic micromanipulator**  
ABLAY G., Boyuk M., İÇÖZ K.  
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, vol.41, pp.3190-3198, 2019 (Journal Indexed in SCI)
- **Automated quantification of immunomagnetic beads and leukemia cells from optical microscope images**  
Uslu F., İÇÖZ K., TAŞDEMİR K., YILMAZ B.  
BIOMEDICAL SIGNAL PROCESSING AND CONTROL, vol.49, pp.473-482, 2019 (Journal Indexed in SCI)
- **Capturing B type acute lymphoblastic leukemia cells using two types of antibodies**  
İÇÖZ K., Gercek T., Murat A., ÖZCAN S., ÜNAL E.  
BIOTECHNOLOGY PROGRESS, vol.35, 2019 (Journal Indexed in SCI)
- **Quartz-crystal Microbalance Measurements of CD19 Antibody Immobilization on Gold Surface and Capturing B Lymphoblast Cells: Effect of Surface Functionalization**  
İÇÖZ K., SOYLU M. Ç. , Canikara Z., ÜNAL E.  
ELECTROANALYSIS, vol.30, pp.834-841, 2018 (Journal Indexed in SCI)
- **Detection of Proteins Using Nano Magnetic Particle Accumulation-Based Signal Amplification**  
İÇÖZ K., MZAVA O.  
Applied Sciences-Basel, vol.6, 2016 (Journal Indexed in SCI)
- **Image Processing and Cell Phone Microscopy to Analyze the Immunomagnetic Beads on Micro-Contact Printed Gratings**  
İÇÖZ K.  
APPLIED SCIENCES-BASEL, vol.6, 2016 (Journal Indexed in SCI)
- **Magnetic micro/nanoparticle flocculation-based signal amplification for biosensing**  
MZAVA O., TAS Z., İÇÖZ K.  
INTERNATIONAL JOURNAL OF NANOMEDICINE, vol.11, pp.2619-2631, 2016 (Journal Indexed in SCI)
- **Micro- and nanodevices integrated with biomolecular probes**  
Alapan Y., İÇÖZ K., Gurkan U. A.  
BIOTECHNOLOGY ADVANCES, vol.33, pp.1727-1743, 2015 (Journal Indexed in SCI)
- **Using Students' Performance to Improve Ontologies for Intelligent E-Learning System**  
İÇÖZ K., SANALAN V. A. , Cakar M. A. , Özdemir E. B. , Kaya S.  
EDUCATIONAL SCIENCES-THEORY & PRACTICE, vol.15, pp.1039-1049, 2015 (Journal Indexed in SSCI)

- **On-demand weighing of single dry biological particles over a 5-order-of-magnitude dynamic range**  
Chan B., İÇÖZ K., Huang W., Chang C., Savran C. A.  
LAB ON A CHIP, vol.14, pp.4188-4196, 2014 (Journal Indexed in SCI)
- **Selective Weighing of Individual Microparticles Using a Hybrid Micromanipulator-Nanomechanical Resonator System**  
Chan B., Icoz K., Gieseck R. L. , Savran C. A.  
IEEE SENSORS JOURNAL, vol.13, pp.2857-2862, 2013 (Journal Indexed in SCI)
- **A Compact Manually Actuated Micromanipulator**  
Chan B., Mateen F., Chang C., Icoz K., Savran C. A.  
JOURNAL OF MICROELECTROMECHANICAL SYSTEMS, vol.21, pp.7-9, 2012 (Journal Indexed in SCI)
- **Nanomechanical biosensing with immunomagnetic separation**  
Icoz K., Savran C.  
APPLIED PHYSICS LETTERS, vol.97, 2010 (Journal Indexed in SCI)
- **Diffraction Detection of Proteins Using Microbead-Based Rolling Circle Amplification**  
Lee J., Icoz K., Roberts A., Ellington A. D. , Savran C. A.  
ANALYTICAL CHEMISTRY, vol.82, pp.197-202, 2010 (Journal Indexed in SCI)
- **Noise analysis and sensitivity enhancement in immunomagnetic nanomechanical biosensors**  
Icoz K., Iverson B. D. , Savran C.  
APPLIED PHYSICS LETTERS, vol.93, 2008 (Journal Indexed in SCI)

### Articles Published in Other Journals

- **Parameter investigation of topological data analysis for EEG signals**  
ALTINDİŞ F., YILMAZ B., Borisenok S., İÇÖZ K.  
Biomedical Signal Processing and Control, vol.63, 2021 (Refereed Journals of Other Institutions)
- **Improving short-term memory performance of healthy young males using alpha band neurofeedback**  
Gökşin B., YILMAZ B., İÇÖZ K.  
NeuroRegulation, vol.6, pp.15-22, 2019 (Refereed Journals of Other Institutions)
- **Ball Lens Based Mobile Microscope**  
İÇÖZ K.  
JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, vol.19, pp.603-610, 2016 (Journal Indexed in ESCI)

### Books & Book Chapters

- **Biyosinyal İşleme**  
İÇÖZ K.  
in: Biyomedikal Mühendisliğin Temelleri, Asyalı M., Kara S., Yılmaz B., Editor, Nobel Yayın Dağıtım, Ankara, pp.253-301, 2014

### Refereed Congress / Symposium Publications in Proceedings

- **A backstepping based contactless manipulation of a magnetic microparticle**  
ABLAY G., Eroğlu Y., Büyük M., İÇÖZ K.  
International Conference on Material Science and Technology (IMSTEC'19), Ankara, Turkey, 18 - 20 October 2019
- **Geriadımlamalı Yaklaşım ile Bir Manyetik Mikromanipülâtörün Kontrolü**  
ABLAY G., Eroğlu Y., Büyük M., İÇÖZ K.  
Otomatik Kontrol Ulusal Toplantısı, TOK2019, Turkey, 11 - 14 September 2019, pp.221-224
- **On the Magnetic Tweezer Design and Modeling**

ABLAY G., İÇÖZ K., Büyük M., Eroğlu Y.

International Eurasian Conference on Biological and Chemical Sciences (EURASIANBIOCHEM 2019), Ankara, Turkey, 28 - 29 June 2019

● **Active control of magnetic particles with a horizontal magnetic tweezer**

ABLAY G., BÖYÜK M., Eroğlu Y., İÇÖZ K.

International Mediterranean Science and Engineering Congress (IMSEC 2018), Adana, Turkey, 24 - 26 October 2018

● **A horizontal magnetic tweezer for single molecule micromanipulations**

ABLAY G., BÖYÜK M., Eroğlu Y., İÇÖZ K.

International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT 2018), Ankara, Turkey, 19 - 21 October 2018

● **Use of Topological Data Analysis in Motor Intention Based Brain-Computer Interfaces**

ALTINDİŞ F., YILMAZ B., BORISENOK S., İÇÖZ K.

European Signal Processing Conference (EUSIPCO), Rome, Italy, 3 - 07 August 2018, pp.1695-1699

● **Micromanipulation based on electromagnetic actuators**

ABLAY G., İÇÖZ K., BÖYÜK M.

International Scientific and Vocational Studies Congress (BILMES2018), Nevşehir, Turkey, 5 - 08 July 2018

● **Electromagnetic Micromanipulator Designs for Biological Species**

BÖYÜK M., İÇÖZ K., ABLAY G.

International Eurasian Conference on Biological and Chemical Sciences (EURASIANBIOCHEM 2018), Ankara, Turkey, 16 - 20 April 2018, pp.156-162

● **Design of Magnetic Tweezers for Single Molecule Manipulation**

CANLILAR M. A. , SELİM F. T. , PAYAS A., BÖYÜK M., İÇÖZ K., ABLAY G.

International Conference on Materials Science Mechanical and Automation Engineering and Technology (IMSMATEC 2018), İzmir, Turkey, 10 - 12 April 2018, pp.1-5

● **Design of magnetic actuator based microsensor system**

ABLAY G., İÇÖZ K.

2nd International Mediterranean Science and Engineering Congress, 25 - 27 October 2017

● **Nickel micro pads and columns for trapping immunomagnetic beads and captured leukemia cells**

BÖYÜK M., HASAN M., ABLAY G., İÇÖZ K.

2nd International Conference on Material Science and Technology in Cappadocia (IMSTEC 2017), Nevşehir, Turkey, 10 - 11 October 2017

● **IMMOBILIZATION OF TUMOR CELLS ON MICRO PADS FOR IMAGE BASED QUANTIFICATION**

İÇÖZ K.

1th International Conference on Progress in Applied Science, İstanbul, Turkey, 4 - 06 January 2017, pp.327-328

● **Cell Phone Microscopy + Image Processing: Low Cost Readout Method for BioMEMS**

İÇÖZ K.

3rd International Congress on Biosensors, Ankara, Turkey, 5 - 07 October 2016, pp.35

● **Micro/Nano Magnetic Particle Accumulation on Micro Contact-Printed Gratings**

İÇÖZ K.

12th International Nanoscience and Nanotechnology Conference, Kocaeli, Turkey, 3 - 05 June 2016, pp.70

● **Magnetic-particle based signal amplification method integrated with mobile-devices for low cost biosensing**

Mzava O., Tas Z., Lafci V. C. , Cakar M. A. , Ozdur I., İÇÖZ K.

26th Anniversary World Congress on Biosensors (Biosensors), Gothenburg, Sweden, 25 - 27 May 2016, vol.27, pp.14-15

● **Point-of-Care Screening for Sickle Cell Disease By a Mobile Micro-Electrophoresis Platform**

Ung R., Alapan Y., Hasan M. N. , Romelfanger M., He P., Tam A., Rosanwo T., Akkus A., CAKAR M. A. , İÇÖZ K., et al.

57th Annual Meeting of the American-Society-of-Hematology, Florida, United States Of America, 5 - 08 December 2015, vol.126

● **AN ONTOLOGY EDITOR: CREATING CONCEPT MAPS FOR SEMANTIC WEB BASED E-LEARNING**

## **SYSTEMS**

Icoz K., CAKAR M. A. , YIĞİT T., Egi S.

8th International Technology, Education and Development Conference (INTED), Valencia, Spain, 10 - 12 March 2014, pp.7505-7509

## **Supported Projects**

İÇÖZ K., TUBITAK Project, MRD Biyoçip: Minimal Rezidüel Hastalığın Basit ve Güvenilir bir yolla izlenmesi, 2015 - Continues

İÇÖZ K., Project Supported by Higher Education Institutions, Manyetik Parçacıkların kullanıldığı biyosensörlerde mikronano demir parçacıklar kullanarak işaret artırma ve mobil cihazlardan algılama sisteminin geliştirilmesi, 2015 - 2017

YILMAZ B., İÇÖZ K., BORISENOK S., ERKUTLU İ., Project Supported by Higher Education Institutions, Motor niyet dalgaları tabanlı ihtiyaç iletim sistemi tasarımı, 2015 - 2017

İÇÖZ K., TUBITAK Project, Manyetik Parçacıkların Kullanıldığı Biyosensörlerde Mikro/Nano Demir Parçacıklar Kullanarak İşaret Arttırma Ve Hassasiyeti Geliştirme, 2014 - 2017

İÇÖZ K., TUBITAK Project, E-öğrenme portalı için akıllı sistem tasarımı, 2013 - 2016

## **Invited Congress and Symposium Activities**

Electrochemical nucleic acid based biosensors/microfluidic devices for healthcare applications, Attendee, United Kingdom, 2016

## **Citations**

Total Citations (WOS):162

h-index (WOS):7