

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

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

Undergraduate, 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

Associate Professor, Abdullah Gul University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2018 - Continues

Assistant Professor, Abdullah Gul University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2014 - 2018

Academic and Administrative Experience

Advising Theses

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

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

- I. **Tuning optical properties of self-assembled nanoparticle network with external optical excitation**
Senel Z., İÇÖZ K., ERDEM T.
JOURNAL OF APPLIED PHYSICS, vol.129, no.15, 2021 (Journal Indexed in SCI)
- II. **High spatial resolution IoT based air PM measurement system**
Icoz E., Malik F. M. , İÇÖZ K.
ENVIRONMENTAL AND ECOLOGICAL STATISTICS, 2021 (Journal Indexed in SCI)
- III. **Optical detection of microplastics in water**
Iri A. H. , Shahrah M. H. A. , Ali A. M. , Qadri S. A. , ERDEM T., ÖZDÜR İ. T. , İÇÖZ K.
ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, 2021 (Journal Indexed in SCI)
- IV. **Immunomagnetic separation of B type acute lymphoblastic leukemia cells from bone marrow with flow cytometry validation and microfluidic chip measurements**
İÇÖZ K., EKEN A., Cinar S., Murat A., ÖZCAN S., ÜNAL E., Deniz G.
SEPARATION SCIENCE AND TECHNOLOGY, 2020 (Journal Indexed in SCI)
- V. **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, no.3, 2020 (Journal Indexed in SCI)
- VI. **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)
- VII. **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)
- VIII. **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, no.11, pp.3190-3198, 2019 (Journal Indexed in SCI)
- IX. **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)
- X. **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, no.1, 2019 (Journal Indexed in SCI)
- XI. **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, no.5, pp.834-841, 2018 (Journal Indexed in SCI)
- XII. **Detection of Proteins Using Nano Magnetic Particle Accumulation-Based Signal Amplification**
İÇÖZ K., MZAVA O.
Applied Sciences-Basel, vol.6, no.12, 2016 (Journal Indexed in SCI)

- XIII. **Image Processing and Cell Phone Microscopy to Analyze the Immunomagnetic Beads on Micro-Contact Printed Gratings**
İÇÖZ K.
APPLIED SCIENCES-BASEL, vol.6, no.10, 2016 (Journal Indexed in SCI)
- XIV. **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)
- XV. **Micro- and nanodevices integrated with biomolecular probes**
Alapan Y., İÇÖZ K., Gurkan U. A.
BIOTECHNOLOGY ADVANCES, vol.33, no.8, pp.1727-1743, 2015 (Journal Indexed in SCI)
- XVI. **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, no.4, pp.1039-1049, 2015 (Journal Indexed in SSCI)
- XVII. **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, no.21, pp.4188-4196, 2014 (Journal Indexed in SCI)
- XVIII. **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, no.8, pp.2857-2862, 2013 (Journal Indexed in SCI)
- XIX. **A Compact Manually Actuated Micromanipulator**
Chan B., Mateen F., Chang C., Icoz K., Savran C. A.
JOURNAL OF MICROELECTROMECHANICAL SYSTEMS, vol.21, no.1, pp.7-9, 2012 (Journal Indexed in SCI)
- XX. **Nanomechanical biosensing with immunomagnetic separation**
Icoz K., Savran C.
APPLIED PHYSICS LETTERS, vol.97, no.12, 2010 (Journal Indexed in SCI)
- XXI. **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, no.1, pp.197-202, 2010 (Journal Indexed in SCI)
- XXII. **Noise analysis and sensitivity enhancement in immunomagnetic nanomechanical biosensors**
Icoz K., Iverson B. D. , Savran C.
APPLIED PHYSICS LETTERS, vol.93, no.10, 2008 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **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)
- II. **Microfluidic Devices: A New Paradigm in Toxicity Studies**
BOŞGELMEZ İ. İ. , İÇÖZ K., YİĞİT F. E.
Hacettepe Journal of Biology and Chemistry, vol.48, no.3, 2020 (Refereed Journals of Other Institutions)
- III. **Improving short-term memory performance of healthy young males using alpha band neurofeedback**
Gökşin B., YILMAZ B., İÇÖZ K.
NeuroRegulation, vol.6, no.1, pp.15-22, 2019 (Refereed Journals of Other Institutions)
- IV. **Ball Lens Based Mobile Microscope**
İÇÖZ K.
JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, vol.19, no.4, pp.603-610, 2016 (Journal Indexed in ESCI)
- V. **Küresel Lens Temelli Mobil Mikroskop**
İÇÖZ K.
Politeknik Dergisi, vol.19, no.4, pp.603-610, 2016 (Other Refereed National Journals)

Books & Book Chapters

I. **Biyosinyal İşleme**

İÇÖZ K.

in: Biyomedikal Mühendisliğinin Temelleri, Asyalı M., Kara S., Yılmaz B., Editor, Nobel Yayın Dağıtım, Ankara, pp.253-301, 2014

Refereed Congress / Symposium Publications in Proceedings

I. **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

II. **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

III. **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

IV. **Image-processing based signal readout method for MRD biochip MRD BiyoçIP İçin Görüntü İşleme Temelli Sinyal Elde Etme Metodu**

uslu F., İÇÖZ K., TAŞDEMİR K.

27th Signal Processing and Communications Applications Conference, SIU 2019, Sivas, Turkey, 24 - 26 April 2019

V. **LOW-COST MICROFLUIDICS FOR MONITORING MINIMAL RESIDUAL DISEASE(MRD)**

akar ü., İÇÖZ K.

International Summit of Innovation in Medicine-4, 11 - 13 October 2018, pp.43-46

VI. **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

VII. **MEASUREMENT OF THE IMPACT OF ADP ON BLOOD COAGULATION USING PAPER BASED BIOSENSORS**

GERÇEK T., İÇÖZ K.

3rd International Energy and Engineering Congress, Gaziantep, Turkey, 18 - 19 October 2018, pp.28-32

VIII. **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

IX. **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

X. **Micromanipulation based on electromagnetic actuators**

ABLAY G., İÇÖZ K., BÖYÜK M.

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

XI. **The Impact of Protein G Layer on 11-Mercaptoundecanoic Acid Coated Gold Surface for Antibody Immobilization**

İÇÖZ K., SOYLU M. Ç.

International Congress on Engineering and Life Science, 26 - 29 April 2018

XII. **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

- XIII. **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
- XIV. **Capturing Leukemia Cells Using Two Different Antibodies**
gerçek t, İÇÖZ K.
2nd International Mediterranean Science and Engineering Congress, 25 - 27 October 2017
- XV. **Design of magnetic actuator based microsensor system**
ABLAY G., İÇÖZ K.
2nd International Mediterranean Science and Engineering Congress, 25 - 27 October 2017
- XVI. **Design of a magnetic actuator based microsensor system**
ABLAY G., İÇÖZ K.
International Mediterranean Science and Engineering Congress (IMSEC 2017), Adana, Turkey, 25 - 27 October 2017
- XVII. **Nickel Micro Pads and Columns For Trapping Immunomagnetic Beads and Captured Leukemia Cells**
büyük m., Hassan M., ABLAY G., İÇÖZ K.
2nd International Conference on Material Science and Technology in Cappadocia, 11 - 13 October 2017
- XVIII. **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
- XIX. **Immunomagnetic capture efficiency of leukemia cells**
İÇÖZ K.
22nd International Biomedical Science and Technology Symposium, 12 - 14 May 2017
- XX. **MRD Biochip**
İÇÖZ K.
Select Biosciences BioMEMS and Microfluidics: Technologies and Applications Conference, Boston, United States Of America, 16 - 17 March 2017
- XXI. **Cultivation-Free Bacteria Detection from Water Samples**
İÇÖZ K.
2nd International Water and Health Congress, 14 - 17 February 2017
- XXII. **Immobilization of Tumor Cells on Micro Pads for Image Based Quantification**
İÇÖZ K.
Istanbul International Conference On Progress in Applied Science, 4 - 06 January 2017
- XXIII. **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
- XXIV. **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
- XXV. **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
- XXVI. **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
- XXVII. **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

XXVIII. 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., Yılmaz B., TUBITAK Project, MRD Biyoçip: Minimal Rezidüel Hastalığın Basit ve Güvenilir bir yolla izlenmesi, 2015 - 2020

İÇÖZ K., Project Supported by Higher Education Institutions, Manyetik Parçacıkların kullanıldığı biyosensörlerde mikronano demir parçacıklar kullanarak işaret arttırma 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

Edit Congress and Symposium Activities

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

Citations

Total Citations (WOS):171

h-index (WOS):7

Non Academic Experience

Business Organization (private), Intel Corp., Metrology And Inspection Systems