

Prof.Dr. HALUK KÜLAH

Kişisel Bilgiler

İş Telefonu: [+90 312 210 6309](tel:+903122106309)

E-posta: kulah@metu.edu.tr

Web: <https://biomems.eee.metu.edu.tr>

Eğitim Bilgileri

Doktora, The University of Michigan, Engineering, EECS, Amerika Birleşik Devletleri 1998 - 2003

Yüksek Lisans, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Ve Elektronik Mühendisliği (YI) (Tezli), Türkiye 1996 - 1998

Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, Türkiye 1991 - 1996

Yabancı Diller

İngilizce, C1 İleri

Yaptığı Tezler

Doktora, Closed-Loop Electromechanical Sigma-Delta Microgravity Accelerometers, The University Of Michigan, Eecs, 2003

Yüksek Lisans, A CMOS integrated PtSi schottky-barrier infrared dedector for night applications, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Ve Elektronik Mühendisliği (YI) (Tezli), 1998

Araştırma Alanları

Elektrik-Elektronik Mühendisliği, Elektronik, MEMS, Mühendislik ve Teknoloji

Akademik Unvanlar / Görevler

Prof.Dr., Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2014 - Devam Ediyor

Doç.Dr., Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2009 - 2014

Yrd.Doç.Dr., Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2005 - 2009
Öğretim Görevlisi, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2004 - 2005

Araştırma Görevlisi, The University of Michigan, Engineering, EECS, 1998 - 2004

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Verdiği Dersler

Yönetilen Tezler

- Külah H., Charge balanced neural stimulation interface circuit for fully implantable cochlear implants, Yüksek Lisans, H.ANDAÇ(Öğrenci), 2020
- Külah H., Fully autonomous piezoelectric energy harvesting interface circuit utilizing low profile nonlinear switching technique, Yüksek Lisans, B.ÇİFTÇİ(Öğrenci), 2020
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- Külah H., Bat E., Capture of circulating tumor cells from blood on modified gold surfaces inside the microfluidic channels, Yüksek Lisans, D.ÇETİN(Öğrenci), 2019
- Külah H., Işık Akçakaya D., System integration of mems devices on flexible substrate for fully implantable cochlear implant applications, Yüksek Lisans, A.KAAN(Öğrenci), 2019
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- KÜLAH H., Design of a radiation hardened PWM controller built on SOI, Yüksek Lisans, E.KILIÇ(Öğrenci), 2018
- KÜLAH H., Enrichment of MCF7 Breast Cancer Cells from Leukocytes Through Continuous Flow Dielectrophoresis, Yüksek Lisans, Z.ÇAĞLAYAN(Öğrenci), 2018
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- KÜLAH H., YILDIRIM E., A mems based drug effect analysis system utilizing droplet microfluidics, Yüksek Lisans, M.DÜNDAR(Öğrenci), 2018
- KÜLAH H., A lab-on-a-chip system integrating dielectrophoretic detection and impedance counting units for chemotherapy guidance in leukemia, Doktora, Y.DEMİRCAN(Öğrenci), 2018
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- KÜLAH H., Ultra-low power interface electronics design for fully implantable cochlear implants, Doktora, H.ULUŞAN(Öğrenci), 2018
- KÜLAH H., Optimization of compact electromagnetic energy harvesters for wireless sensor applications, Yüksek Lisans, O.YAŞAR(Öğrenci), 2017
- KÜLAH H., Lens-free imaging of DEP manipulated cancer cells, Yüksek Lisans, M.KAMİL(Öğrenci), 2017
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- AZGIN K., KÜLAH H., Development of a high yield fabrication process for MEMS based resonant mass sensors for cell detection applications, Yüksek Lisans, T.BERKİN(Öğrenci), 2014
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SERT C., KÜLAH H., Design and fabrication of a DNA electrophoresis chip based on MEMS technology, Yüksek Lisans, S.SUKAS(Öğrenci), 2007

Jüri Üyelikleri

Ödül, IEEE Türkiye Teşvik ve Doktora Ödülleri , IEEE, Kasım, 2018

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- **Modeling and fabrication of electrostatically actuated diaphragms for on-chip valving of MEMS-compatible microfluidic systems**
Atik A. C. , Ozkan M. D. , Ozgur E., Külah H., Yıldırım E.
JOURNAL OF MICROMECHANICS AND MICROENGINEERING, cilt.30, 2020 (SCI İndekslerine Giren Dergi)
- **Enhancement of the Start-Up Time for Microliter-Scale Microbial Fuel Cells (mu MFCs) via the Surface Modification of Gold Electrodes**
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● **Examination of the dielectrophoretic spectra of MCF7 breast cancer cells and leukocytes**

Çağlayan Z., Demircan Yalçın Y., KÜLAH H.

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● **A Self-Adapting Synchronized-Switch Interface Circuit for Piezoelectric Energy Harvesters**

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IEEE TRANSACTIONS ON POWER ELECTRONICS, cilt.35, ss.901-912, 2020 (SCI İndekslerine Giren Dergi)

● **Exploring the relationship between cytoplasmic ion content variation and multidrug resistance in cancer cells via ion-release based impedance spectroscopy**

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● **Power-Efficient Hybrid Energy Harvesting System for Harnessing Ambient Vibrations**

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● **Fully Implantable Cochlear Implant Interface Electronics With 51.2- μ W Front-End Circuit**

Ulsan H., Chamanian S., Ilik B., Muhtaroglu A., KÜLAH H.

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● **Implementation of Energy-Neutral Operation on Vibration Energy Harvesting WSN**

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● **Thin film piezoelectric acoustic transducer for fully implantable cochlear implants**

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● **Optimization of AA-Battery Sized Electromagnetic Energy Harvesters: Reducing the Resonance Frequency Using a Non-Magnetic Inertial Mass**

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