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### Kişisel Bilgiler

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### Uluslararası Araştırmacı ID'leri

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### 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 ve Elektronik Mühendisliği Bölümü, 2014 - Devam Ediyor

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

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

Öğretim Görevlisi, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Elektrik ve Elektronik Mühendisliği Bölümü, 2004 - 2005

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## Verdiği Dersler

Introduction to Analog Integrated Circuits, Lisans, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2012 - 2013

## Yönetilen Tezler

Külah H., LARGE FRACTIONAL BANDWIDTH ELECTROMAGNETIC ENERGY HARVESTER AND INTERFACE CIRCUIT WITH 0.1-2 G ACCELERATION RANGE, Yüksek Lisans, A.MERT(Öğrenci), Devam Ediyor

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KÜLAH H., A microfluidic system for dielectrophoretic characterization of cancer cells, Yüksek Lisans, K.SEL(Öğrenci), 2018

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KÜLAH H., Lateral mode resonators for in liquid biosensing applications with a second harmonic based read out method, Yüksek Lisans, E.AYDIN(Öğrenci), 2017

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KÜLAH H., Mikroakışkan tabanlı ayarlanabilir antenlerin geliştirilmesi, Yüksek Lisans, S.Seyedpour(Öğrenci), 2015

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KÜLAH H., Assessment of changes in the dielectric properties of multidrug resistant cancer cells by electrorotation technique, Yüksek Lisans, G.BAHRIEH(Öğrenci), 2014

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KÜLAH H., CMOS A/D converter implementation for IMU applications, Yüksek Lisans, Ö.LÜTFİ(Öğrenci), 2013

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(SEB) and Candida albicans, Yüksek Lisans, D.ERTÜRKAN(Öğrenci), 2012

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BALKAN R. T., KÜLAH H., A MEMS thermoelectric energy harvester for energy generation in mobile systems, Yüksek Lisans, E.TAN(Öğrenci), 2011

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KÜLAH H., Design and prototyping of an electromagnetic mems energy harvester for low frequency vibrations, Yüksek Lisans, S.TÜRKYILMAZ(Öğrenci), 2011

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BALKAN R. T., KÜLAH H., Design, fabrication and implementation of a vibration based MEMS energy scavenger for wireless microsystems, Doktora, İ.SARI(Öğrenci), 2008

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KÜLAH H., SERT C., 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

- I. **Detection of circulating tumor cells in non-metastatic prostate cancer through integration of a microfluidic CTC enrichment system and multiparametric flow cytometry**  
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- II. **A microfluidic platform for real-time enumeration and high accuracy retrieval of a very low number of cells**  
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- III. **Pre-enrichment-free detection of hepatocellular carcinoma-specific ctDNA via PDMS and MEMS-based microfluidic sensor**  
Çağlayan Arslan Z., Okan M., KÜLAH H.  
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- IV. **Piezoelectric Multi-Channel Bilayer Transducer for Sensing and Filtering Ossicular Vibration**  
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- V. **A pumpless monolayer microfluidic device based on mesenchymal stem cell-conditioned medium promotes neonatal mouse in vitro spermatogenesis**  
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- VI. **Analytical Validation of a Spiral Microfluidic Chip with Hydrofoil-Shaped Pillars for the Enrichment of Circulating Tumor Cells**  
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- VII. **Microfluidic-based blood immunoassays**  
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- VIII. **Spheroid Engineering in Microfluidic Devices**  
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- IX. **Label-free enrichment of MCF7 breast cancer cells from leukocytes using continuous flow dielectrophoresis**  
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- X. **Thin-Film PZT based Multi-Channel Acoustic MEMS Transducer for Cochlear Implant Applications**  
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- XI. **A microfluidic device enabling drug resistance analysis of leukemia cells via coupled dielectrophoretic detection and impedimetric counting**  
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- XII. **A Low-Profile Autonomous Interface Circuit for Piezoelectric Micro-Power Generators**  
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- XIII. **13.56 MHz Triple Mode Rectifier Circuit With Extended Coupling Range for Wirelessly Powered Implantable Medical Devices**  
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- XIV. **A Self-Powered and Area Efficient SSHI Rectifier for Piezoelectric Harvesters**  
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- XV. **Single Supply PWM Fully Implantable Cochlear Implant Interface Circuit with Active Charge Balancing**  
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- XVI. **Modeling and fabrication of electrostatically actuated diaphragms for on-chip valving of MEMS-compatible microfluidic systems**  
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- XVII. **A Prominent Cell Manipulation Technique in BioMEMS: Dielectrophoresis**  
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- XVIII. **A Novel Microfluidic Method Utilizing a Hydrofoil Structure to Improve Circulating Tumor Cell Enrichment: Design and Analytical Validation**  
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- XIX. 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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- XXIV. Fully Implantable Cochlear Implant Interface Electronics With 51.2- $\mu$ W Front-End Circuit**  
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- XXV. Exploring the relationship between cytoplasmic ion content variation and multidrug resistance in cancer cells via ion-release based impedance spectroscopy**  
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- XXX. Optimization of AA-Battery Sized Electromagnetic Energy Harvesters: Reducing the Resonance Frequency Using a Non-Magnetic Inertial Mass**  
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