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

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

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KÜLAH H., AKIN T., Capacitive CMOS readouts for high performance MEMS accelerometers, Yüksek Lisans, U.SÖNMEZ(Öğrenci), 2011

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

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- 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**
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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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- 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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- XXIII. Power-Efficient Hybrid Energy Harvesting System for Harnessing Ambient Vibrations**
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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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- XL. **Characterization of the distribution of rotational torque on electrorotation chips with 3D electrodes**
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