Kazem Bakian Dogaheh

Personal Data

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Education

Ph.D In Electrical Engineering — **Los Angeles, U.S**
University of Southern California — Aug 2017 - Present

B.Sc In Electrical Engineering with Concentration in Telecommunication — **Tehran, Iran**
University of Tehran — 2012 - 2017

GPA: **16.89/20**

Research Interests

- Radar Instrument and Measurement Technologies for Subsurface and Subcanopy Characterization
- Forward and Inverse Scattering Techniques of Layered Media
- Transforming Concepts of Radar Remote Sensing to Near-Field and Medical Imaging and Therapy System

Research Experience

- **University of Southern California**
  - **Microwave Systems, Sensors and Imaging Laboratory (MiXIL)** — Aug 2017 - Present
    - Estimation of belowground biomass and Permafrost active layer properties using radar and lidar measurments part of NASA ABoVE (Arctic -Boreal Vulnearability Experiment) project
- **University of Tehran**
  - **Antenna Research Laboratory** — Feb 2016 - Feb 2017
    - **Thesis:** System design of an imaging system capable of detecting and locating live victims trapped under the collapsed buildings debris
  - **Photonics Research Laboratory** — Jan 2015 - Jul 2017
    - Designed and implemented an MRI Optcial Signaler with the application in functional MRI for University of Tehran National Brain Mapping Laboratory
    - Designed and implemented a Digital Light Processor (DLP) driver for spectroscopy applications
    - Analysis of a dual mode surface plasmon resonance for increasing the sensitivity of surface plasmon resonance sensor in a Kretschmann configuration
  - **Nano-Bio Electronics Laboratory** — Jul - Dec 2015
    - Monitored the growth of breath cancer cell using surface plasmon resonance (SPR) sensor

University of Tehran Teaching Assistant Experience

- **Theory of Electromagnetics (Graduate)** (Fall), **Communication Circuits** (Fall, Spring), **Microwave Engineering I** (Fall), **Electromagnetics** (Fall), **Antenna Laboratory** (Spring) — 2016-2017
- **Communication Circuits** (Fall, Spring), **Engineering Mathematics** (Fall, Spring), **Microwave Engineering I** (Fall), **Antenna Engineering I** (Spring), — 2015-2016

- **Electromagnteics Fields and Waves** (Fall, Spring), **Signals and Systems Analysis** (Spring), **Electronics I** (Fall) 2014-2015

Professional Experience

- **University of Tehran**
  - Antenna Type Approval Laboratory Jun 2015 - Jul 2017
    Technical Staff, RF, Microwave and MM-Wave Characterization
    - Hands on Experience in using RF, Microwave and MM-Wave measurement equipments
    - Familiar with general requirements of testing and calibration lab standard (ISO 17025)
  - Photonics Research Lab May-Oct 2016
    Research Staff, RF and Microwave Circuits and System Design for Cellular Communications Systems
    - Feasibility study of, design a LTE macro, micro stand alone Base Station RF Front-End and wrote a proposal worths approximately $ 300K
    - Designed, implemented and measured a high isolation (up to 44dB) power combiner for GSM BTS
  - Science and Technological Park, Ragan Parto Pars CO. Jun - Dec 2015
    RF System Engineer
    - Designed and implemented a high frequency, and Digital Printed circuits Board
    - Designed and implemented a educational antenna kit for antenna lab course
    - Designed and implemented high power waveguide filter

Technicals Skills

- **Labatory skills**
  - Familiar with on wafer characterization using cascadeprobe station
  - Free space optical alignment
  - Opto-mechanical structure
  - Experienced working in anechoic chamber and antenna pattern measurement
- **Biology**
  - Familiar with Biological Cell Culture
- **Computational Electromagnetic Software**
  - COMSOL Multiphysics, Ansoft HFSS, Keysight ADS
- **Scientific Programming, Hardware Discription**
  - MATLAB, Microsoft Visual Studio C++, Fortran, VHDL, Verilog
- **RF and Digital Circuit Design**
  - Altiume Design, Eagle PCB

Honors and Awards

- University of Southern California, Department of Electrical Engineering Research Assistantship 2017
- University of Michigan Ann-arbor, Department of Electrical Engineering Fellowship 2017