

Dr. Sara S. Ghoreishizadeh

Junior Research Fellow, Imperial College London

Personal information

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Employment

Dec. 2015- **Junior Research Fellow**, Department of Electrical and Electronic Engineering,
Nov. 2018 Imperial College London, UK
My research is focused on developing Lab-on-CMOS as well as circuits and systems to enable miniaturised and autonomous electrochemical sensing on CMOS. I volunteered and taught lectures in undergraduate and graduate courses and have so far supervised 12 students towards PhD, MSc and MEng.

April 2015- **Research Associate**, CBIT, Imperial College London, UK
Nov. 2015 I was involved in CANDO project. I designed and developed a novel on-chip interface for recovering power and providing full-duplex communication over an AC-coupled implantable lead between active implantable devices.

Oct. 2010- **Research Assistant**, Integrated Systems Laboratory (LSI), EPFL
Mar 2015 I designed and developed low-power analog/mixed-signal ICs to control and readout electrochemical biosensors. I was in charge of closing an interdisciplinary project which developed an implantable and wireless device for human metabolite sensing.

Education

2010- 2015 **PhD**, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland
Supervisors: G. De Micheli and S. Carrara; viva and PhD award date: June 2015

2007- 2009 **MSc** in Microelectronics Circuits, Sharif University of Technology (SUT), Iran,
Viva and MSc award date: Dec 2009, *GPA: 17.03/20*

2003- 2007 **BSc** in Electrical Engineering (Minor: Electronics), SUT, Iran, *GPA: 17.96/20*

Research Funding and Honours

Feb. 2015 **Junior Research Fellowship** (total £150k), Imperial College London (ICL), UK.
I won the prestigious JRF award (currently known as Imperial College Research Fellowship) to pursue my research vision. JRF acceptance rate is ~15% (20 awarded out of 130 applicants across all disciplines and nationalities). The award provides salary plus 30k GBP research grant for three years.

Sept. 2010 **PhD Scholarship** awarded at EEE department, EPFL, Switzerland.

June 2007 **In top 1%** of 10,000 participants in "national entrance examination for M.Sc. in electrical engineering", Iran. I secured the government scholarship for MSc studies.

Aug. 2003 **In top 0.01%** of 450,000 participants in "national university entrance examination", Iran. I secured the government scholarship for my BSc studies at the top university.

Student Supervision

RA/PhD Dorian Hacı (joint with Dr. Timothy Constandinou)
MSc (2018) Bruno Donato (joint with Dr. Pantelis Georgiou)
MSc (2017) Bournas Charalampos,
Andrea Mifsud (joint with Dr. Yan Liu), **best ICL EEE MSc ADIC thesis award**
MSc (2016) Chang Gao (joint with Dr. Yan Liu), **best ICL EEE ADIC MSc thesis award**
Xiaotian Zhang (joint with Dr. Pantelis Georgiou and Dr. Sanjiv Sharma)
MEng Wenkun He and Wei Ting (2018), Daryl Ma (**Won best student paper award in BioCAS 2017**) and Wei Te (2017), Pascal Loose and Christian Lending (2016)

Teaching Experiences

2017 *Biomedical electronics course, 6×1hour* - Imperial College London, UK
2016 *Biomedical electronics course, 4×1hour* - Imperial College London, UK
2015 *Full-custom IC design course, 1hour* - Imperial College London, UK
2014 *Bio-nano-chip design course, 1hour* - EPFL, Switzerland

Administrative Activities

Editor Journal of Microelectronics (2015-present)
RCM IEEE ICECS 2016, IEEE BioCAS 2017
Session chair IEEE BioCAS 2017, IEEE ICECS 2016
Member IEEE, IET, IEEE CASS, IEEE SSCS, IEEE EMBS, IEEE WiCAS
Marker MEng and MSc theses (2016, 2017) and BEng final year project (2015) at EEE, ICL

Invited Seminar Talks

Jan 2018 Technical University of Berlin, Sensor and Actuator Systems group
Nov 2017 University of Glasgow, Dept. of Electronic and Nanoscale Engineering
Sept 2017 UCL, Department of Electrical and Electronic Engineering
Nov 2013 University of Zurich, Institute of Neuroinformatics Engineering
Dec 2013 Imperial College London, Department of Electrical and Electronic Engineering

Publication Summary

Journals **total: 9 (first author of 4)**: 1× IEEE TCAS-I, 3× IEEE TBCAS, 1×IEEE Sensors letters, 2× IEEE Sensors, 1×Sensors, 1× Biosensors and Bioelectronics
IEEE Conf. **total: 19 (first or last author of 11)** including 9× IEEE BioCAS, 3× IEEE ISCAS, 1× IEEE LASCAS, 1× DATE, 1× IEEE ECCTD, and 1× IEEE Sensors
Patent "On-chip random ID generation" S. Ghoreishizadeh, and T. Constandinou, GB, 2017