

MOHAMED A. BAHLOUL

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OBJECTIVE

Recently graduated, multidisciplinary M.Sc.Eng with excellent problem solving abilities and process-thinking skill seeks hands on experience within a company that embraces creativity and innovation. Through my studies, I have gained extensive knowledge of production and manufacturing engineering, product design, among many other components of Electrical Engineering. Effective communicator who builds positive, cohesive relationship with all level of staff, eager to put my extensive studies to practical, applied use.

EDUCATION

- King Abdullah University of Science and Technology, KSA** Sep 2017 - present
Ph.D. in Electrical Engineering
Advisor: Meriem Laleg-Kirati
- King Abdullah University of Science and Technology, KSA** Jan 2016 - Aug 2017
M.Sc. in Electrical Engineering.
Research Work: Arterial Fractional Order Model.
- Engineering National School of Sfax, TN (Cooperation TU Chemnitz, DE)** Sept 2013 - Dec 2015
M.Sc. in Embedded Systems.
Thesis: Resistive Ternary Content Addressable Memory based In-memory Computing.
- University Of Montpellier, France** Sep 2014 - Aug 2015
M.Sc. in Microelectronic Systems.
Thesis: Memristor Content Addressable Memory based Associative Processing.
- Engineering National School of Sfax, TN** Sep 2012 - Sep 2015
B.Sc. in Electrical Engineering, ranked first.

EXPERIENCE

- King Abdullah University of Science and Technology** Feb 2017 - present
Graduate Researcher (EMAN Group) Thuwal, KSA
- Research mainly revolves around the Modeling and Simulation of Biomedical Device and system, Fractional Order circuit Modeling for biology application, Lumped parameter modeling of Cardiovascular System, Neuroscience, Neuro-imaging, Bio-signal and medical image processing.
- Advisor: Meriem Laleg-Kirati
- King Abdullah University of Science and Technology** Jan 2016 - Jan 2017
Graduate Researcher (Sensors lab) Thuwal, KSA
- Research was in: Memristor based In-memory computing, Associative processing, FPGA Hardware implementation of Memristor based Ternary Content Addressable Memory.
- Advisor: Khaled N. Salama
- University of California, Irvine** Jun 2016 - Aug 2016
Visiting Scholar (Center for Embedded & Cyber-physical Systems) Irvine, CA, USA
- Research was focused on Design & Analysis of 2-Transistors 2-memoristors Ternary content addressable Memory.
- Mentors: Ahmed. M. Eltawil and Fadi J. Kurdahi

King Abdullah University of Science and Technology*KAUST VSRP Student (Visiting Student Research Internship Program)*

March 2015 - Dec 2015

Thuwal, KSA

- Research was in: Resistive memory, Memristor device characterization and FPGA implementation, and Resistive Associative Processor simulation.

Mentors: Mohammed A. Zidan, Rawan Naous and Khaled. N. Salama**University Of Montpellier***Graduate Researcher (LIRMM)*

Sep 2014 - March 2015

Montpellier, France

- Research was in analog design of Low Power CMOS Triangular Voltage Generator.

Advisor: Pascal Nouet and Arnaud Virazel**Engineering National School of Sfax***Student/Intern (Electronics Micro technology and Communication lab)*

Jun 2014 - Sep 2014

Sfax, Tunisia

- Research was focused on Design of Electrical Muscle Stimulator circuit.

Mentors: Sameh Fakhfakh and Mohamed Masmoudi**Tunisian Company of Electricity and Gas (STEG)***Directed Student, Summer Engineering Intern*

Summer 2013

Sfax, Tunisia

Academic Mentors: Nouri Masmoudi**PUBLICATIONS**

1- *Memristor Based Programmable Current Reference Generator*Mohamed A. Bahloul, Mariem Bouraoui, Imen Barraaj, Mohammed E. Fouda And Mohamed Masmoudi

In proceeding of IEEE International Multi-Conference on Systems, Signals & Devices (SSD), 2018.

2- *Arterial Fractional Order Model*Mohamed A. Bahloul and Meriem Laleg-Kirati

Poster in the 40th IEEE Engineering in Medicine and Biology Society (EMBC), 2017.

3- *Design and Analysis of 2T-2M Ternary Content Addressable Memories*M. A. Bahloul, M. E. Fouda, R. Naous, M. A. Zidan, A. M. Eltawil, F. Kurdahi and K. N. Salama In proceeding of IEEE International Midwest Symposium on Circuits and Systems (MWSCAS), 2017.4- *Hardware emulation of Memristor based Ternary Content Addressable Memory*Mohamed A. Bahloul, Rawan Naous and M. Masmoudi In proceeding of IEEE International Multi-Conference on Systems, Signals & Devices (SSD), 2017.5- *Three-element Fractional Order Viscoelastic Windkessel Model*Mohamed A. Bahloul and Meriem Laleg-Kirati

Submitted in the 40th IEEE Engineering in Medicine and Biology Society (EMBC), 2018.

6- *Investigation of Aortic Input Impedance within the framework of Fractional-Order Modeling*Mohamed A. Bahloul and Meriem Laleg-Kirati

In submission.

7- *Memristor based chirp pulse generator for FSK-UWB Transmitter*I. Barraaj, M. Bahloul, and M. Masmoudi

In submission to Electronic Letter, 2018.

HONORS & AWARDS

- Ministry of Higher Education and Scientific Research Fellowship, Tunisia** 2014
For excellence in Electrical Engineering undergraduate program. Annual award to only one Electrical Engineering senior student by National School of Engineering of Sfax to allow him continue his graduate studies in UM, France.
- KAUST Graduate Fellowship, Saudi Arabia** 2016 2017
- ENIS Graduate Fellowship, Tunisia** 2014 2015
- Freescale cup: Intelligent car racing, Casablanca, Morocco** 2014

SERVICES

- Member in the student branch of the Institute of Electrical and Electronics Engineers, KAUST.
- IEEE Engineering in Medicine and Biology Society Student member.
- Reviewer: SSD, 2018.

SOFTWARE & HARDWARE SKILLS

Circuit Design & Analysis

SPCIE (+Scripting)
Verilog
VHDL
Spectre

Programming & Scripting

Python (Scripting)
C++/C
Matlab
NI LabVIEW

Electronics Lab Equipment

Scopes
Probe-Stations
Semiconductor Analyzers
Spectrum Analyzers,...

Others

FPGAs
LaTeX/LyX
OS: Mac OS, Unix, Windows
Clean Room: Sputtering, Lithography,...

RELEVANT COURSES

Core Courses

VLSI Design
Integrated Sensors
Monolithic Amplifier Circuits
Solid-State Device Laboratory
Semiconductor Optoelectronic Devices
Control Theory (Linear & Non-linear)

Other Courses

Neuro-imaging
Signal processing
Applied Mathematics
Applied Statistics and Data Analysis
Principles of Optics & Electromagnetic
Advanced Topics in Circuits & Microsystems

INTERESTS

- Neuroscience, Brain computing, Brain mapping.
- Biomedical Devices Design and applications.
- Science and technology.
- Travel and History.
- Sport.

LANGUAGES

Arabic: Mother tongue
English: Spoken and Written (Good)

Deutsch: Spoken and Written (Medium)
French: Spoken and Written (Good)