

Mahmoud Ahmed Metwally

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Professional Experience

Research Assistant

12/2014 - Current

North Carolina State University

- Designed a MM-wave High-Impedance Stacked Output CMOS Power Amplifier at 45GHz frequency in CMOS process.
- Developing Terahertz Nano-Radio Platform with Integrated Antenna and Power source for sensors applications.

RF/Analog Circuit Design Engineer

5/2012 - 4/2014

Newport Media - fabless IC Design Inc.

- Design and layout RF blocks for WIFI standard at 2.4GHz and 5GHz using 40nm process.
 - Up-conversion passive Mixer
 - Frequency divider - ported from 65nm
- Design and layout RF blocks for FM tuner at 100MHz in 65nm and then ported to 40nm process:
 - Resistive-feedback Low Noise Amplifier (LNA) with programmable gain
 - Down-conversion passive Mixer
- Layout experience in both DC and high frequency circuits using 65nm and 40nm technologies.
- Familiar with TSMC 180nm, 130nm, 65nm and 40nm process nodes.
- Testing and measurements experience in both RF and DC-DC converter circuits.

Research assistant

10/2011 - 5/2012

Ain Shams University, Cairo, Egypt

- Worked on Radio planning SW called "Wireless Insite" to simulate the received power map in an RF harsh environment for a WSN.

Teaching assistant

10/2011 - 5/2012

American University in Cairo AUC, Egypt

- Teaching assistant in Digital Design IC subjects with Dr. Mohab Anis.

Computer Skills

- Programming software: Ocean Scripting – C/C++
- IC Design Flow Tools: Cadence Virtuoso XL – Mentor Graphics Tools.
- Circuit Design Simulators: Spectre–SpectreRF– AFS – HSPICE
- Digital Design and Simulation: Xilinx ISE – ModelSim – FPGA Advantage.
- Mathematical & Programming Tools: MATLAB
- Microwave Design Tools: CST MW Studio – ANSOFT Designer – MW office.
- Device Simulation Tools: Silvaco – Padre.

Education

Ms. Candidate **9/2012 – 5/2014**

Cairo University, Cairo, Egypt

- **Did not complete thesis requirements due to relocating to the USA**
- Completed all coursework with a GPA of 3.8/4.0

B.Sc. in Communications and Electronics Engineering **9/2006–8/2011**

Ain Shams University, Cairo, Egypt

GPA3.4

References

- **Ahmed Emira** – RF/Analog team lead at Newport Media Inc (aemira@nmisemi.com)
- **Hasan Elwan** – RF/Analog team lead at Newport Media Inc (helwan@nmisemi.com).
- **EdwardYoussefian** – RF/Analog team manager at Newport Media Inc (eyoussefian@nmisemi.com)
- **Hani Fekry** – Professor at Ain Shams University, Egypt (hfragai@gmail.com)
- **Mohamed El-Hadidy** – Associate Professor at Duseburg University (mohamed.el-hadidy@uni-due.de)
- **David Ricketts** – Associate professor at North Carolina State University – Electrical and Computer department (dricketts@ncsu.edu)