

Leo Filippini

Summary I am a PhD candidate focusing on charge recovery logic and low-power VLSI systems, with a strong background in analog IC design and layout in deep-submicron CMOS. I have cleanroom and tapeout experience and a sound understanding of transistor level design and device physics.

Education

- Present **PhD candidate**, *Drexel University*, Philadelphia (PA).
Electronics Engineering
- 2013 **Master Degree**, *University of Brescia*, Brescia (Italy), *summa cum laude*.
Electronics Engineering
- 2010 **Bachelor Degree**, *University of Brescia*, Brescia (Italy).
Information Engineering

Experience

- Present **Research Assistant**, *Drexel University*, Philadelphia, PA (USA).
My research is focused on low-power methodologies for VLSI circuits. I am currently investigating novel implementations of charge-recovery logic, power-clock generation, and modeling of such systems.
- 2013 **Intern**, *Imec*, Heverlee (Belgium).
For my Master's thesis I spent six months designing an integrated transimpedance amplifier for capacitive micromachined ultrasonic transducers (CMUT). Detailed achievements:
- Implementation of the transducer model
 - Design of a topology new to the application
 - Tape-out in CMOS 180nm
- 2010 **Intern**, *University of Brescia – Physics Department*, Brescia (Italy).
For four months I worked on my Bachelor's thesis: *Synthesis and Integration of Quantum Dot Semiconductors in Third Generation Excitonic Solar Cells*. Along with my supervisors, we chemically synthesized different types of quantum-dots and built many solar cells. I, in particular, took care of the substrate deposition and characterization, the construction of the cells and their optical and electrical characterization.

Languages

- Italian Native
- English Proficient – TOEFL iBT: 107/120

Publications & Awards

- 2016 Leo Flippini and Baris Taskin, “*Charge Recovery Logic for Thermal Harvesting Applications*”, ISCAS, May 2016
- 2015 Leo Flippini, Emre Salman, and Baris Taskin, “*A Wirelessly Powered System with Charge Recovery Logic*”, ICCD, October 2015
- 2014 Can Sitik, Sungjun Yoon, Leo Flippini, Emre Salman, and Baris Taskin, “*FinFET-Based Low Swing Clocking*”, JETC, August 2015
- 2014 Can Sitik, Leo Flippini, Emre Salman, and Baris Taskin, “*High Performance Low Swing Clock Tree Synthesis with Custom D Flip-Flop Design*”, ISVLSI, July 2014
- 2011 Winner of European *Lifelong Learning Program* (LLP) scholarship