Braedon Salz

Call me Brady?

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Education

Aug 2015 - May 2017 **M.S. Electrical Engineering**, *University of Illinois at Urbana-Champaign*, **GPA: 3.74/4.00**.
Mixed Signal IC Design under Professor Pavan Hanumolu

Aug 2011 - May 2015 **B.S. Electrical Engineering**, *University of Illinois at Urbana-Champaign*, **GPA: 3.47/4.00**.
Relevant Coursework:
High Speed Serial Links, Machine Learning in Silicon, Digital IC Design, Advanced Power Electronics, Wireless Networks and Mobile Systems, Machine Learning, Advanced Analog IC Design, Active Microwave Circuits, Digital Signal Processing

Graduate Research

Aug 2015 - June 2017 **Graduate Research**, *Mixed Signal IC Design Group*, Champaign, IL.

- Taped out active fully digital tunable inductor in TSMC 65nm
- Published in IEEE-CICC 2017:
  "A 0.7V Time-based Inductor for Fully Integrated Low Bandwidth Filter Applications"
- Interested in energy efficient data converters and serial links

Work Experience

June 2017 - Current **Electrical Engineer**, *Astranis*, San Francisco, CA.

- Hardware lead for telecomm satellite payload design
- Designing custom high-speed software-defined radios
- System design, schematic capture, layout, bringup, the whole thing

Jan 2015 - June 2017 **Teaching Assistant**, *UIUC*, Champaign, IL.

- ECE445 Senior Design for 3 semesters
- ECE482 Digital IC Design for 1 semester
- Voted to the "*LIST OF TEACHERS RANKED AS EXCELLENT BY THEIR STUDENTS*"

May 2016 - Aug 2016 **IC Design Intern**, *Analog Devices*, Wilmington, MA.

- Design + preliminary layout of receiver architecture in TSMC 28nm CMOS
- Optimized equalization and amplification stage (20dB, 16GBps)
- Lowered active power by 50%, expected area by 33%

May 2015 - Aug 2015 **Applications Intern**, *Cirrus Logic*, Austin, TX.

- Performed schematic capture and aided with board layout for consumer projects
- Aided with software automation and toolchain of internal toolset
- Debugged failed dies alongside FA team

Skills

Languages Python, Verilog, Verilog-AMS, SPICE, C, C++, MATLAB, Javascript, Android

Software Cadence Virtuoso, ADS, Altium, EagleCAD, KiCad, AVR Studio

Projects

MoViRad Created an Android application that could monitor biomedical signals through ultrasonic FMCWs. Achieved over 85% accuracy on breathing and 90% accuracy on heart rate

MinVAD Tested various compression architectures (analog and digital) for detecting human voice activity. Trained a machine learning core that achieved 90% accuracy in up to 10dB SANR situations.

ECE598RPP Project Investigated time domain control of asymmetric interleaving buck converters. Time domain control reduces inductor ripple by an estimated 40% (simulation).