Mark H. Spatz

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Education

May 2014: B.S. in Electrical Science and Engineering, Massachusetts Institute of Technology
December 2016 (Anticipated): MEng in Electrical Science and Engineering, Massachusetts Institute of Technology

Coursework

6.334: Power Electronics, 6.332: Advanced Topics in Power Electronics,
6.302: Feedback Systems, 6.301: Solid State Circuits,
6.003: Signals and Systems, 6.041 Probabilistic Systems Analisys, 6.011,
18.06: Linear Algebra, 18.0851: Computational Science & Engineering I,
6.012: Microelectronic Devices & Circuits, 6.013: Electromagnetics and Applications,
6.002: Circuits & Electronics, 6.131: Power Electronics Lab,
6.556: Data Acquisition and Image Reconstruction in MRI,
6.776: High Speed Communications Circuits,
6.01, 6.02, 6.004, 6.006, 6.101, 18.03, Chinese I

Experience

Research Assistant, Martinos Center for Biomedical Imaging. September 2015 - Present: Designing, building, and testing massively parallel 3T MRI receive arrays for fetal imaging at 22 and 36 weeks of pregnancy.

Electrical Engineer, SQZ Biotech. June-August 2015: Developed a pressure control system to drive material through microfluidic chips.

Electrical Engineer, Ashton Instruments. February-May 2015: Created a devvoard for a bicycle power meter. Created/maintained various pieces of firmware and data analysis software.

iPad Systems EE Intern, Apple Inc. June-December 2014: Worked on the systems integration team facilitating pre-production iPad builds, troubleshooting production and desense issues, and completing characterization tasks.

Research Intern, Fitbit Inc. Summer 2013: Developed a new pedometer algorithm for internal verification purposes and did investigative work on the electronics for a new product.

Production Intern, Fitbit Inc. Summer 2012: Helped with preliminary FCC testing for the fitbit One, and spent a total of four weeks in mainland China helping bring up production lines for the fitbit Zip.

Interests and Skills

- Circuit design and debugging
- PCB design, mostly using KiCad
- RF hardware
- Switching converters and other power electronics
- ARM development
- Proficient in C, Python, and Matlab.

References Available upon Request