

Ranbel Sun

3 Ames St. #313

Cambridge, MA 02142

(205) 826-8094

ranbel@mit.edu

EDUCATION

Candidate for S.B./M.Eng in Electrical Science and Engineering

June 2011

Massachusetts Institute of Technology (Cambridge, MA)

- Minor in Biomedical Engineering
- GPA: 4.7/5.0
- **Coursework:** Circuits and Electronics; Signals and Systems; Computation Structures; Digital Systems Lab; Intro to Communication, Control, and Signal Processing; Quantitative Physiology; Biological Instrumentation and Measurement Lab; Microelectronic Devices (in progress)

EXPERIENCE

RF Design Intern

Summer 2009

Boston Scientific – Cardiac Rhythm Management (St. Paul, MN)

- Tested electromagnetic compatibility and performance limits of implantable pacemakers and ICDs.
- Critiqued test methodology prescribed in industry standards and linked results to real world susceptibility.
- Compiled comprehensive written report and presented recommendations to senior staff.

Wireless Sensor Developer

June 2008 – May 2009

MIT House_n Research Group (Cambridge, MA)

- Spearheaded hardware development for ubiquitous health monitoring project sponsored by the NIH.
- Collaborated in interdisciplinary team to enable data streaming to mobile phones.
- Device is currently being used for research studies at MIT and Stanford.

Orthopedic Device Designer

Jan. – Aug. 2008

Massachusetts General Hospital (Boston, MA)

- Pioneered the creation of a wearable sensor for preventing hip dislocation in surgical patients.
- Developed working prototype which is presently being converted to work wirelessly.

Microelectronics Research Intern

Summer 2007

Georgia Institute of Technology (Atlanta, GA)

- Fabricated, characterized, and optimized organic field-effect transistors made with a new semiconductor.
- Authored report in the MIT Undergraduate Research Journal, coauthored publication in *Macromolecules*.
- Presented findings to interdepartmental faculty, graduate students, and undergraduate researchers.

TECHNICAL SKILLS

Operating Systems: Windows, Unix/Linux

Programming: working knowledge of C, Verilog, MATLAB, Python; basic knowledge of Java

Software: MATLAB, Eagle PCB layout, ModelSim, LabView, Adobe Photoshop, MS Office/Open Office

Equipment: oscilloscope, function generator, logic analyzer, SMT soldering, thin film deposition (various)

LEADERSHIP/ACTIVITIES

Volunteer Electronics Instructor

Summer 2008

MIT High School Studies Program (Cambridge, MA)

- Planned and taught 8-week, hands-on electronics seminar to 12 students using original course materials.

PERSONAL

Awards/Distinctions: Tau Beta Pi, National Society of Collegiate Scholars, Eta Kappa Nu Honor Society, Digital Systems Lab - Technical Writing Award, AP Scholar with Distinction, National Merit Finalist, National Elks Foundation Most Valuable Student Scholarship

Languages: English (native), French, Mandarin Chinese

Interests: art, sport taekwondo, soccer, piano, travel