

REBECCA RASHKIN

Computer and Electrical Engineering Educator

Santa Cruz, CA
rebeccarashkin@gmail.com

EDUCATION

Master of Science - Computer Engineering AUGUST 2018
Baskin School of Engineering, University of California - Santa Cruz, CA

Bachelor of Science - Electrical Engineering DECEMBER 2011
University of Central Florida - Orlando, FL

TEACHING AND RESEARCH

Instructor of Record, Computer Systems and Assembly Language JUNE 2018 - AUGUST 2018
Baskin School of Engineering, University of California - Santa Cruz (SUMMER POSITION)
→ Teach as primary instructor using active learning methods
→ Design lab assignments, exams, and quizzes
→ Supervise teaching assistant and lab tutor

Graduate Student Researcher, Mobile Health Applications OCTOBER 2014 - PRESENT
Baskin School of Engineering, University of California - Santa Cruz
→ Designed multi-threaded Android application to generate audio and record heart rate data
→ Interfaced with wearable Bluetooth low energy heart rate monitor
→ Calculated, analyzed and plotted heart rate metrics (Python packages: Numpy, Matplotlib, StatsModels)
→ Designed and facilitated user study to test how audio affects the heart

Graduate Teaching Assistant, Computer Engineering JANUARY 2015 - PRESENT
Baskin School of Engineering, University of California - Santa Cruz
→ Effectively address student challenges concerning computer engineering courses
→ Mentored and counseled students regarding professional, academic, and personal matters

COURSES

Computer Systems and Assembly Language (CMPE 012) APRIL 2018 - JUNE 2018
→ Designed midterm review and accompanying 20-page fill-in-the-blank workbook
→ Instructed students in lab assignments for logic design and MIPS assembly programming using MARS
→ Prepared original exam questions on CMOS transistor circuits, logic gates, MIPS, numbering systems
→ Built logic circuit diagrams in LaTeX using library CircuitTikZ
→ Managed grade uploads and graded assignments
→ Programmed Python scripts for reading and modifying text files

Computer Architecture (CMPE 110) OCTOBER 2016 - MARCH 2018
→ Led instruction of 30+ diverse students in active learning environment through lively discussion
→ Prepared and presented original course notes and lesson plans
→ Managed team of eight graders and teaching assistants in evaluation related tasks (Fall 2016)
→ Formulated original homework problems and solutions
→ Proctored exams for 200+ students, facilitated exams and quizzes for students with disabilities

Research and Teaching in Computer Science and Engineering (CMPE 200) OCTOBER 2017 - DECEMBER 2017
→ Advised students on resume building, essay writing, and professional development
→ Graded homework, managed late submissions, provided recommendations to faculty for course improvement

Digital Logic Design (CMPE 100) OCTOBER 2017 - DECEMBER 2017
→ Provided assistance to students in lab assignments using FPGA schematic and Verilog design
→ Discussed applications of logic circuits and finite state machines

Advanced Logic Design (CMPE 125) JANUARY 2017 - MARCH 2017
→ Prepared notes and presented short lectures to instruct students on Verilog assignments
→ Graded lab reports, provided guidance on effective technical documentation

INDUSTRY

Engineering Intern - *Scotts Valley, CA* Lumenetix

JUNE 2017 - FEBRUARY 2018

- Designed object-oriented framework for automated light testing (Python, Raspberry Pi, SPI, RS232)
- Interfaced with I/O controllers using TCP protocol and USB libraries (Python, C)
- Tested lights for luminous flux, correlated color temperature, power usage, and color rendering index
- Produced color models for LED lights to generate accurate correlated color temperatures

Electrical Engineer I - *Jacksonville, FL* Logistic Services International (LSI)

JANUARY 2012 - JUNE 2014

- Designed electrical system upgrades for aircraft simulators
- Troubleshoot video, power, I/O, and networking issues
- Engaged customers during corporate events and field installations
- Designed and presented AutoCAD workshop to engineering team

PROJECTS

AutoCAD Standards

MARCH 2012 - JUNE 2014

- Researched and implemented national drafting standards: National CAD Standard (NCS), ASME
- Designed company standard sheet border and title block based on ASME Y14.1 - 2012
- Updated and implemented electrical drafting practices and procedures
- Created standard page setups increasing batch plotting efficiency
- Developed standard text and multileader styles
- Reformatted and managed company drafting standard document and associated repository
- Recorded screen capture videos of AutoCAD tips and tricks to train drafting team
- Designed custom pensets (.ctb file) mapping colors to line weights based on ISO standard

Lead Hardware Engineer

AUGUST 2013 - JUNE 2014

Environmental Control System Parts Task Trainer (ECPTT, Apache AH-64)

- Designed electrical system upgrade including specifying new components (e.g. relays, cannon plugs)
- Analyzed existing electrical system and PLC ladder logic
- Prepared electrical slides for Preliminary and Critical Design Review presentations
- Presented electrical design to U.S. Army representative during design reviews

Black Hawk Maintenance Trainer (BHMT, UH-60)

MARCH 2013 - JUNE 2014

- Designed 60 Hz and 400 Hz power distribution through hardware training device
- Determined I/O signals based on required student tasks
- Researched and specified electrical components including connectors, wire gauges
- Managed electrical drawing package

Modernized TADS Selected Task Trainer (M-TSTT, Apache AH-64) & Longbow Controls Displays Selected Task Trainer (LCDSTT, Apache AH-64)

JULY 2012 - MARCH 2013

- Performed field upgrades and installations at various Army bases across the U.S.
- Managed and updated Technical Drawing Package
- Oversaw drafting team in Operations and Maintenance Manual update
- Scheduled and tasked hardware technicians
- Prepared electrical schematics for hardware upgrades
- Presented at Interservice/Industry Training, Simulation and Education Conference (I/ITSEC)

Electrical Drafter, Intern - *Maitland, FL* CDMSmith, Electrical Group

FEBRUARY 2009 - DECEMBER 2011

- Drafted 2D & 3D electrical diagrams: single line power, front elevation, control, site / floor plans
- Recreated standard electrical symbols in AutoCAD
- Batch plotted drawing sets and created PDFs from plot files
- Performed load calculations

Sustainability Assistant - *Orlando, FL* University of Central Florida Arboretum

FEBRUARY 2009 - DECEMBER 2011

- Evaluated conference abstracts determining accepted presentations to sustainability conference
- Coordinated logistical aspects of conference to ensure seamless event
- Reached out to student organizations to encourage participation in Adopt-A-Pond program
- Supervised interns and service learning students

COMMUNITY SERVICE

Net Control Operator - Santa Cruz, CA

OCTOBER 2017 - JANUARY 2018

University of California, Santa Cruz Amateur Radio Club

- Managed message transmission flow between radio operators to practice on-air communication methods
 - Organize and promote club events including antenna building, educational talks, and exam prep
 - Track club membership and participation
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Biomedical Engineering Category Judge - San Jose, CA

MARCH 2016

Synopsys Championship - Santa Clara County Science Fair

- Interviewed 8th grade students on biomedical engineering projects, encouraging STEM careers
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Workshop Facilitator: Robots and Rainbows - Pleasant Hill, CA

MAY 2015

Expanding Your Horizons Young Women's STEM Conference

- Designed and facilitated collaborative RGB LED electronic art project with middle school girls
 - Taught basic concepts in electronics, light, and color
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Guest Teacher - Jacksonville, FL

MAY 2014

Thomas Jefferson Elementary School

- Created and presented LED activity and electricity lesson and to 2nd grade students
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Big Sister - Jacksonville, FL

AUGUST 2013 - JUNE 2014

Big Brothers Big Sisters of Northeast Florida

- Mentored high school student, helping her establish personal and professional goals
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HONORS

- Regents' Fellowship
 - Progress Energy Leadership Institute
 - Burnett Honors College
 - Walt Disney World Ride and Show Scholarship
 - National Scholars Honor Society
 - AT&T Wireless Endowed Scholarship
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CERTIFICATIONS

Engineering Intern - License #1100018152

JANUARY 2014

Florida Board of Professional Engineers

Amateur Radio General Class Operator - Call sign WA6BIT

OCTOBER 2017

National Association for Amateur Radio

SKILL SET

Technical

Python, Java, Android, C, HTML, CSS, LaTeX, MATLAB, Fortran, Verilog, Assembly, UNIX command line interface, SSH, version control (Git, SVN), FPGA schematic and HDL design, technical documentation management, graphic design, hardware prototyping, drafting, AutoCAD, PCB design, Raspberry Pi, Arduino, SPI, RS232

Personal

creative thinker, collaborative worker, independent learner, adaptable, positive, detail-oriented

STUDENT REVIEWS

Computer Architecture (CMPE 110)

Rebecca was the most effective TA in this class. I learned more from her than from any other TA, or professor combined. Her notes, section, and office hours really helped me in this class.

I've gotten more out of Rebecca's sections than I've gotten out of section for any other class I've taken. She does a very good job at explaining the material and makes time outside of section and office hours to be available, scheduling a finals review session during finals week.

Rebecca went above and beyond to help me get through this class. I had a lot of external things going on that prevented me from doing as well as I normally can, but she helped me find ways to make it work, including helping me via email with material that the class had long since covered.

Rebecca's office hours were what got me through the homeworks in this class. She was always able to explain the problems in a way that made them easy to understand and could always provide examples similar to the homework problems. She really seemed to care about the students learning the material.

Rebecca cares about teaching us the material and worked hard to make sure that everybody had all of their questions answered every section. Was even willing to meet outside of regular class hours, taking time out of her day to help students struggling with the homework!

She is probably one of the nicest TA's I've ever met--extremely down-to-earth. She was always willing to help and explain concepts clearly, and very professional too. Overall, great TA!

Digital Logic Design (CMPE 100)

Rebecca was always super friendly and great at explaining concepts. I hope I can have her as a TA again!

Rebecca was fantastic. Not only was she willing to spend as much time with a student as needed to help solve the problem, but she almost always had a smile on her face and made you feel like you weren't a complete idiot!

Overall, she was enthusiastic, witty and motivational, creating a positive learning environment for the typical exhausted CE student.