

# Bret Bosma

---

435 SW 5<sup>th</sup> St  
Corvallis, OR 97333  
[bret@bretbosma.com](mailto:bret@bretbosma.com)

## Education

---

**California State University, Chico** Graduated: May, 2008  
Masters of Science in **Electrical and Computer Engineering** **GPA: 3.8**

**California State University, Chico** Graduated: May, 2005  
Bachelors of Science in **Electrical Engineering** CSU Chico GPA: **3.5**  
Minor: **Mathematics**

**Santa Rosa Junior College** Santa Rosa, CA  
Associates of Science – General Graduated: December, 2002  
**Special program:** 1 year work abroad program to London, England

## Experience

---

**Lecturer** Fall 07-Spring 09  
C.S.U. Chico Electrical & Mechanical Engineering Departments Chico, CA

- Spring 09 – Signals and Transforms, Electronics I Lab
- Fall 08 – Graphics I, Graphics I lab, Linear Circuits Lab
- Spring 08 – Signals and Transforms, DSP lab, Micromouse
- Fall 07 - Control System Design lab, Graphics I Lab

**Teaching Assistant** Fall 04-Fall 07  
C.S.U. Chico Electrical & Mechanical Engineering Departments Chico, CA

- Spring 07 – Signals and Transforms, Micromouse
- Fall 06 – Control System Design lab, Micromouse
- Spring 06 – Digital Signal Processing lab, Electronics I lab, Micromouse
- Fall 05 – Control System Design lab
- Fall 04, Spring 05 - Linear Circuits help session, grading

**Electromechanical System Equipment Technician**  
C.S.U. Chico College of ECC

June 2005-June 2009  
Chico, CA

- Maintain Labs for the Electrical & Mechanical Engineering Departments
- Assist in student projects, both design and implementation
- Coordinate lab materials with instructors for weekly activities

**Energy Systems Green Campus Intern / Advisor**  
Alliance to Save Energy, Green Campus Program

August 2005-June 2008  
Chico, CA

- Work closely with faculty, housing, and facilities management at CSU Chico to implement energy saving projects on campus
- Metering residence halls and computer power management software a couple of key projects
- Obtained over \$49,000 in energy rebates for the University

**Research Assistant**  
C.S.U Chico Research Foundation

April 2006-July 2009  
Chico, CA

- Degradable plastic packaging and disposal project
  - Designed and implemented control system for testing plastic degradation including sequenced valve switching, CO<sub>2</sub>, RTD, and O<sub>2</sub> sensors
- Biodiesel generation project

## **Presentations/Publications**

---

### **Presentations**

- UC/CSU/CCC Sustainability Conference 2008, Best Practices in Energy Efficiency and Renewable Energy Projects.
- This Way to Sustainability IV, Fostering Sustainability in the Campus Residential Setting – Displaying building energy consumption for behavior change and sustainability education.
- This Way to Sustainability III, Student Led Initiatives to Save Energy.
- This Way to Sustainability III, Chico and Humboldt State Green Campus Interns: How to conduct an energy audit.
- Green Campus Energy Efficiency Summit 2008, New and Emerging Technology Demonstrations: Real Time Energy Metering.

## Publications

- 2009 ASEE Annual Conference and Exposition, Energy Conversion and Conservation Division: Renewable Energy Labs for an Undergraduate Energy Systems Course, **Best Paper Award**.

## Professional Development

---

- **UC/CSU/CCC Sustainability Conference July 31 – August 3, 2008**  
Presented as member of best practice award winner green campus for best practices in energy efficiency and renewable energy projects. Over 1100 students, staff, faculty and administrators in California higher education gather to explore the ways in which we can implement social, environmental, and economic sustainability on our campuses state wide.
- **Public Interest Environmental Law Conference, March 2-5, 2006. March 6-9, 2008.**  
Attended conference and learned about legal issues related to alternative energy sources, biofuels, and sustainable practices.
- **U.S. Department of Energy's Solar Decathlon, October 12-20, 2007.** Attended the competition held on the National Mall in Washington D.C. in which 20 teams of college and university students compete to design, build, and operate the most attractive, effective, and energy-efficient solar-powered house. Assisted the third place finisher Santa Clara University in construction on the National Mall.
- **West Coast Green, September 19-22, 2007, September 25-27, 2008.** The nations largest and premier residential green building conference + expo. Attended panels involving green building best practices including panels on passive solar and photovoltaic solar techniques.
- **Plan It Green, Building Green Communities Conference and Expo Event April 4 2009.** Annual Conference involving green building and sustainable transportation best practices.

## Skills

---

| Skill                         | Level        | Last Used      | Experience |
|-------------------------------|--------------|----------------|------------|
| MATLAB/SIMULINK               | Expert       | Currently used | 6 years    |
| Orcad PSPICE                  | Intermediate | Currently used | 6 years    |
| Lab View                      | Intermediate | Currently used | 2 years    |
| Solid Works                   | Intermediate | Currently used | 2 years    |
| Microchip C compiler          | Intermediate | 1 Year ago     | 3 years    |
| Web Design, HTML, PHP, Mysql  | Intermediate | Currently used | 2 years    |
| PLC Programming(ladder logic) | Beginner     | Currently used | 1 year     |
| EAGLE Layout Editor(PCB)      | Beginner     | 2 Years ago    | 1 year     |

## Awards/Activities

---

Eta Kappa Nu (HKN)

Tau Beta Pi (TBP)

Institute of Electrical and Electronics Engineers(IEEE)

American Society of Engineering Education (ASEE)

Boy Scouts of America - Eagle Scout

Interests: Cycling, Backpacking, Hiking