



SUBJECT LINE: Energy Efficiency Research Positions @ CalPlug

To: ICS/CS/CSE/IN4MTX Undergraduates

Come join us at the newly established California Plug Load Research Center, the first energy efficiency center in southern California. We offer great opportunities for the future leaders of information technology to work in a highly interdisciplinary environment for scholarship, research and industry experience. The individual study positions available cover critical topics of plug-load energy management systems at homes and businesses. Interested students are welcome to submit resumes and attend our orientation:

“Introducing CalPlug”
Tuesday, June 25th
5:00-6:00 pm
3008 Calit2 Building
Irvine, CA. 92697-2800

Light refreshments will be provided.

POSITIONS

We are calling for a talented group of students from all **Computer Science** departments to join our team. Diversity is a must for creativity. Current research topics are listed below. Involvement with more than one area can be customized for specific projects.

Demo and Design

- Marketing of “green” products, factors effecting cognitive perception, effective displays visual effects/formatting, and multimedia formats
- Energy footprint for digital media and personal computing
- Home and small business power management systems
- Green software benchmarking and optimization
- HTML and web design skills

Web 3.0

- “Web to Energy” interface
- Advanced data mining and decision engine programming for energy efficient products.
- MySQL or other database language knowledge strongly recommended
- Consumer behavior studies and data aggregation
- Energy conservation in server rooms and small-business data centers
- C, C++, or Java skills necessary for certain positions

BENEFITS

- Students will obtain **hands-on research experiences** for industry leading topics under the guidance of **Prof. G.P. Li**, the Interim Director of CalPlug. Day-to-day supervision will be available from **Dr. Arthur Zhang**, and/or other faculty members.
- Besides **199 course credits** during the Summer quarter of 2013, students maintaining outstanding research performance will be considered for **potential compensation** starting the Fall quarter of 2013.
- Designated **cubicles, project space, testing equipment** and **computers** will be allocated according to project needs.
- **Recommendation letters** provided for CalPlug alumni would be valuable, thanks to CalPlug's strong affiliation with major organizations and industry players, such as the California Energy Commission, Southern California Edison, Broadcom Corporation, the Consumer Electronics Association and other UC campuses.

APPLICATION

Motivated applicants from all Computer Science departments are welcome to apply and attend the orientation event. Please follow these procedures to apply:

1. Submit your one-page resume to Marta Mendoza at martam@calplug.org; copy Dr. Arthur Zhang yzhang@calit2.uci.edu
2. Tell us your interests after the orientation and we'll pair you up with a project.
3. Enroll under Prof. G.P. Li's 199 course code by 5 pm June 21st, July 5th the latest (a \$100 late fee required by the office of registrar). Usual campus requirements for 199 courses applied.

CalPlug

Ubiquitous plug-load devices include appliances, electronics and tools—anything that plugs into an electrical outlet. Currently, these devices are responsible for as much as 20 percent of the electrical consumption in buildings, and 30 percent by 2030. To exacerbate the situation, a majority of these devices consume power even when not in use—the much dreaded “vampire power,” which accounts for over 15 GW power consumption, worldwide, 24/7. The plug loads, if not well managed, could disable California's plans for Zero Net Energy in new homes by 2020.

CalPlug was established to improve energy efficiency in the use and design of appliances and consumer electronic devices. CalPlug focuses on energy efficiency solutions, efficiency evaluations of consumer electronics, standards development, education and public outreach, and user behavior studies. CalPlug will address challenges in plug-load efficiency for both residential and commercial buildings by collaborating closely with utilities, manufacturers, advocacy groups, research institutions and energy policy makers.

CALIT2 UC IRVINE DIVISION

The California Institute for Telecommunications and Information Technology - known as Calit2 - is a two-campus multidisciplinary research institute. One of four UC California Institutes for Science and Innovation, Calit2 divisions at UCI and UC San Diego leverage academic expertise with industry experience to conduct cutting-edge research in diverse fields. The goal: to develop

innovative information technology-based products and services to benefit society and ignite economic development in the region and state. (www.calit2.uci.edu)