

i⁴Energy Center Research Symposium
September 18, 2012 – Sutardja Dai Hall, UC Berkeley

Agenda

- 8:30 am** **Introduction**
Gaymond Yee, CIEE
- 8:40 am** **“FlexLab at LBNL”**
Stephen Selkowitz, LBNL
- “LED Cooling with Piezoelectric Fans”**
Alic Chen, UC Berkeley
- “Fault Detection in Underground Distribution Cables”**
Richard White and Igor Paprotny, UC Berkeley
- “Natural Gas Pipeline Sensors”**
Richard White and Igor Paprotny, UC Berkeley
- “Reference Design for Residential Energy Gateways”**
Daniel Arnold, UC Berkeley
- 10:20 am** **Break**
- 10:30 am** **Enabling Technologies Development Project**
- “Overview UC Berkeley DR Research”**
Paul Wright, CITRIS Director
- “Stick-on Wireless Circuit Breaker Current Monitoring”**
Richard Xu, UC Berkeley
- “Integration of Scavenging, Sensors, And Wireless Systems For Machinery And Energy Plant Monitoring”**
Andrew Waterbury, UC Berkeley
- “Integration of Scavenging and Storage”**
Lindsay Miller, UC Berkeley
- “High-Throughput Printed Energy Storage”**
Rich Winslow, UC Berkeley
- 12:00 pm - 1:30 pm** **Lunch Break (on your own)**
Poster Session and Technology Demonstrations
- 12:40-1:25p:** **Distributed Intelligent Automated Demand Response Demonstration in room 456, Sutardja Dai Hall**
Energy audit and database association (Jason Trager-10 min)
DRAS-SEB-gateway (Prasad Mukka-20 min)
UCB DR controller and HVAC/lighting and typical office plugloads (Michael Sankur-15 min).
- 1:30-1:45p:** **Introductions & Scope of project (David Auslander) in SDH Auditorium**

1:45-2:20p: DRAS-SEB-Gateway-Building functionality

OpenADR (Mary Ann Piette) 5 min

Smart Energy Box (Prasad Mukka) 10 min

Gateway (Michael Sankur/Siyuan Zhou) 10 min

DR controller (Michael Sankur) 10 min

2:20-2:50p Data management and apps

Building-wide Energy Audit & Association (Jason Trager) 10 min

sMAP (David Culler) 10 min

Control integration/PLC and PTC (David Culler) 10 min

Break to 3:00p

3:00-3:50p Modeling and optimization

Establishing a baseline (Tyler Jones) 10 min

Developing the EnergyPlus model/algorithms/simulations (Rongxin Yin) 10 min

UCB DR controller optimization (Jason Trager) 10 min

SEB and gateway optimization (Prasad Mukka/Siyuan Zhou) 10 min

DR Capacity Assessment & Operation Assistance Tool (Thomas Gruenewald) 10 min

3:50-4:30p: Results and next steps

SCR test results with SEB (Prasad Mukka) 10 min

UCB test results (Rongxin Yin) 10 min

Commercialization plan and cost analysis (Pornsak Songkakul) 10 min

Next steps/Wrap up (David Culler) 10 min

4:30 pm

Adjourn