



Neptune Program Review

Tuesday, November 1st – Thursday, November 3rd
University of California, Davis

Tuesday, November 1st - Robert Mondavi Institute and California Lighting Technology Center

- 2:00pm Tour of the Jackson Sustainable Winery – *Jill Brigham*, Executive Director, Sustainable Wine and Food Processing Center (641 Hilgard Lane Davis, CA)
- 3:15pm *Transportation provided to the California Lighting Technology Center (633 Pena Drive Davis, CA)*
- 3:30pm Batteries & Fuels Project Updates (Group 1)
- Exploiting Oxygen Anion Redox for High-energy Rechargeable Lithium Batteries (MIT)
 - Development of low-cost, high-performance electrode materials for Na-ion batteries (Purdue)
- 4:30pm Decision Making (Group 1)
- Portfolio-level Energy Auditing and Decision-making Methodology & Tool (UC Davis)
 - Capturing, Reporting and Tracking Energy Waste at Military Installation (NPS)
- 5:10pm *Break*
- 5:30pm Tour of the California Lighting Technology Center
- 6:45pm *Dinner*
- Welcoming Remarks
Vice Admiral (retired) Mel Williams, UC Davis Office of Research
- 8:30pm *Transportation provided to Downtown Davis*

Wednesday, November 2nd – Putah Creek Lodge and 2nd Floor Memorial Union

7:30am *Transportation provided to Putah Creek Lodge*
(Please meet at the parking lot at the corner of 1st and F Street)

Putah Creek Lodge

(Putah Creek Lodge Drive Davis, CA)

8:15am *Registration and Breakfast*

8:40am Welcome - UC Davis Interim Vice Chancellor of Research, *Cameron Carter*

9:00am Introductions – ONR Department Head for Sea Warfare and Weapons
Department *Dr. Richard T. Carlin*

9:30am Decision Making (Group 2)

- Resilience Processes in Positive Case Studies (ASU)
- Energy Leadership Information Institute (ASU)

10:10am Batteries and Fuels (Group 2)

- Determination of the Impact of Chemical Composition on Measured and Predicted Fuel Properties and on Combustion in Military Diesel Engines (Naval Academy)
- Low cost catalyst for portable hydrogen generation and on-demand power (Purdue)
- Fundamental studies on composition/performance correlations for aviation fuels (Purdue)

11:10am *Break*

11:20am Sensing Project Updates (Group 1)

- Remote sensing for Smart Renewable Power (ASU)
- Occupancy Sensing for Lighting Controls in Outdoor Applications (UC Davis)

12:00pm Naval Postgraduate School Updates

- Naval Postgraduate School FY16-17 Projects (NPS)

12:20pm *Lunch*

1:20pm Technology Engineering Project Updates (Group 1)

- High Performance Recuperator for Waste Heat Recovery Cycles (UC Davis)
- Combat Power Monitor (MIT)
- GaN interface engineering for naval RF power electronics applications via atomic layer epitaxy (Purdue)
- Unlocking the chemistry of the amine-thiol universal solvent system for solutions processed, flexible electronic devices (Purdue)

3:00pm *Break and Group Photo*

3:20pm Organizational Transition Workshop

Beth Broome, Senior Advisor to the Provost, UC Davis

4:45pm *Transportation provided to the Memorial Union*

2nd Floor of the Memorial Union

(On North Quad between East and West Quad Avenues)

5:00pm Poster Session and Reception

Remarks – *Dean Jennifer Curtis*

Mary K. King, Vice President of Human Resources, Pacific Gas & Electric

7:00pm *Dinner – US Bicycle Hall of Fame*
(303 3rd Street Davis, CA)

Thursday, November 3rd - West Village and Putah Creek Lodge

7:30am *Transportation provided to West Village*
(Please meet at the parking lot at the corner of 1st and F Street)

Energy Efficiency Center, West Village

(1605 Tilia Street Davis, CA)

7:50am *Breakfast*

8:00am Welcome – *Maria Medeiros*, Program Officer, ONR Sea Platforms & Weapons Division

8:05am ESTEP Overview Brief – *Stacey Curtis*, Space and Naval Warfare Systems Command, Systems Center Pacific

8:20am Tour of West Village, Honda Smart Home, and Western Cooling Efficiency Center

9:10am *Transportation provided to Putah Creek Lodge*

Putah Creek Lodge

9:30am Infrastructure Project Updates

- Plug in Electric Vehicle Decision Making Data Based Tools (UC Davis)
- Designing and operating self-organizing micro-grids for Civilian and Military Applications (ASU)
- CyCIT-WS Cyber Critical Infrastructure Threat Warning Stream (ASU)
- Adaptive Horizon Model Predictive Control and Regulation of Electric Microgrids (NPS)

11:10am *Break*

11:20am Sensing Project Updates (Group 2)

- Underwater Optical Communications on a Real-time Sensor Mooring Deployed in Tempe Town Lake (ASU)
- Towards vetted sensing and control system firmware and software (Purdue)

12:00pm Technology Engineering Project Updates (Group 2)

- Thermal Management Technologies for Low-Temperature Undersea Dive Persistence: a Novel Arctic Diving Suit (MIT)
- Heterogeneous surface wettability for manipulation of dryout hydrodynamics bubble departure du ring high heat flux boiling processes (Purdue)

12:40pm *Adjourn*