

National University Consortium Annual Review Meeting

August 14-16, 2017

Monday, August 14, 2017

Willow Creek Building

1955 Fremont Ave, Idaho Falls, ID 83415

- 7:30 a.m. Visitor Badging INL Tours
- 8:00 a.m. Travel to Materials and Fuels Complex
- 8:45 a.m. Tour Analytical Laboratory
- 9:30 a.m. Tour Hot Fuels Examination Facility
- 10:30 a.m. Tour Space Battery Building
- 11:15 a.m. Lunch at MFC
- 12:15 p.m. Travel to TREAT
- 12:30 p.m. Tour TREAT
- 1:30 p.m. Travel to ATR
- 2:00 p.m. Tour ATR
- 3:00 p.m. Travel to EBR-I
- 3:15 p.m. Tour EBR-I
- 4:00 p.m. Return to Idaho Falls

Tuesday, August 15, 2017

Energy Innovation Laboratory (775 University Boulevard, Idaho Falls, ID 83415)

7:30 a.m. Coffee and Sign-in

8:00 a.m. Welcome and Introductions Kelly Beierschmitt
Deputy Laboratory Director

8:30 a.m. Energy and Environment Science & Technology Overview..... Todd Combs
EES&T Associate Laboratory Director

9:00 a.m. National and Homeland Security Overview Dan Elmore
Critical Infrastructure Protection Director

9:30 a.m. Break

10:00 a.m. Nuclear Directorate Overviews Ron Crone
Materials and Fuels Complex Associate Laboratory Director

Sean O'Kelly/Dave Schoonen
Advanced Test Reactor Associate Laboratory Director /ATR Chief Operations Officer

John Wagner
Light Water Reactor Sustainability Program Director

11:30 a.m. Oregon State University Presentation Wade Marcum
OSU University Lead

11:45 a.m. North Carolina State University Presentation Yousry Azmy
NCSU University Lead

12:00 p.m. Working Lunch: Technology Deployment and Licensing Jason Stolworthy
Technology Deployment Director

1:00 p.m. Massachusetts Institute of Technology Presentation..... Charles Forsberg
MIT University Lead

1:15 p.m. The Ohio State University Presentation..... Carol Smidts
Ohio State University Lead

1:30 p.m. University of New Mexico Presentation Cassiano R.E. de Oliveira
UNM University Lead

2:00 p.m. LDRD Review: Transient Modeling and Integrated Nuclear Hybrid Energy System..... Shannon Bragg-Sitton
INL Systems Integration Manager

2:30 p.m. LDRD Review: Development of State-of-the-Art Capabilities to Support TREAT ModelingMark DeHart
INL Scientist: Reactor Physics Design & Analysis

3:00 p.m. Break

3:15 p.m. LDRD Review: Interfacing Multiphysics Object-Oriented Simulation Environment Components to Enhance Capability.....Hongbin Zhang
Program Manager Nuclear Engineering Methods Development

3:45 p.m. LDRD Review: Neutron Diagnostics for the TREAT Reactor Cassiano de Oliveira
UNM University Lead

4:15 p.m. LDRD Review: Stress Corrosion Cracking Testing in Supercritical Carbon Dioxide Lucas Teeter
Oregon State University, Graduate Research Assistant

4:45 p.m. LDRD Review: Computationally Efficient Prediction of Containment Thermal Hydraulics Using Multi-Scale Simulation: Feasibility Study Robert Youngblood
INL Scientist: Risk Assessment

5:00 p.m. LDRD Review: Implementation and Validation of Radiation Defect Cluster Dynamics in the Multiphysics Object-Oriented Simulation Environment Cody Permann
INL Scientist: Modeling and Simulation

5:15 p.m. Adjourn All

Copper Hill (415 River Pkwy, Idaho Falls, ID 83402)

6:00 p.m. NUC Leadership Dinner Marsha Bala
NUC Deputy Director

Invitees:

*Amy Lientz
 Andy Klein
 Anil Prinja
 Carol Smidts
 Cassiano de Oliveira
 Charles Forsberg
 Cindy Sagers
 Cody Permann
 Eric Whiting
 Hongbin Zhang
 John Gilligan
 Jacopo Buongiorno
 Kelly Beierschmitt
 Kemal Pasamemetoglu
 Mark DeHart*

*Mark Peters
 Marsha Bala
 Rich Martineau
 Richard Boardman
 Robert Youngblood
 Ron Crone
 Sean O'Kelly
 Sebastien Teysseyre
 Shannon Bragg-Sitton
 Tami Grimmet
 Todd Combs
 Tunc Aldemir
 Wade Marcum
 Yousry Azmy
 Zach Tudor*

Wednesday, August 16, 2017

Energy Innovation Laboratory (775 University Boulevard, Idaho Falls, ID 83415)

7:30 a.m. Coffee and sign-in

8:00 a.m. Partnerships, Engagement and Technology Deployment Overview Amy Lientz
Director of Partnerships, Engagement, and Technology Deployment

8:15 a.m. Versatile Fast Neutron Source Reactor.....Wade Marcum
Oregon State University Lead

Yousry Azmy
North Carolina State University Lead

9:15 a.m. Break

9:30 a.m. Breakout Sessions

A102: Modeling and Simulation (including NEAMS code development and model experimental validation and uncertainty quantification).....Mark DeHart
INL Scientist: Reactor Physics Design & Analysis

A111: Information, Instrumentation, Sensors, and Controls..... Vivek Agarwal
Research Scientist

A112: Used Nuclear Fuel and Waste Related Concepts..... Monica Regalbuto
Integrated Fuel Cycle Solutions Relationship Manager

A113: Energy and Environment Science & Technology CollaborationsEric Peterson
CAES Research Partnership and Strategy Development Lead

A114: Wind Energy Jake Gentle
Power Systems Research Engineer

10:30 a.m. Break

10:45 a.m. Breakout Sessions All

A102: Nuclear Reactor Technologies (including small modular reactors and advanced reactor designs), Light Water Reactor Sustainability Program.....Hans Gougar
Nuclear Engineer

John Wagner
Light Water Reactor Sustainability Program Director

A111: Fuel Cycle Technology Jack Law
Aqueous Separations and Radiochemistry Department Manager

A112: Nuclear Cybersecurity.....Steve Hartenstein
National and Homeland Security Chief Science Officer

A114: Systems Analysis..... Mitchell Kerman
Systems Science and Engineering Director

11:45 a.m. Working Lunch: University Partnerships.....Michelle Bingham
University Partnerships Manager

11:45 a.m. Working Lunch: Closed Meeting with NUC Leads.....Kelly Beierschmitt
Deputy Laboratory Director

Invitees:

Amy Lientz
 Andy Klein
 Anil Prinja
 Carol Smidts
 Cassiano de Oliveira
 Charles Forsberg
 Hongbin Zhang
 Jacopo Buongiorno
 Kelly Beierschmitt

Kostadin Ivanov
 Marsha Bala
 Richard Boardman
 Shannon Bragg-Sitton
 Tami Grimmet
 Tunc Aldemir
 Wade Marcum
 Yousry Azmy

1:00 p.m. Breakout Sessions

A102: Hybrid Energy Systems/Power Conversion and Energy Storage/
 Micro-reactors/Very Small Modular Reactors Shannon Bragg-Sitton
INL Systems Integration Manager

Richard Boardman
Energy Systems Integration Initiatives Director

A111: TREAT Dan Wachs
Fuels Safety Testing Technical Lead

A112: Advanced Transportation..... Eric Dufek
Energy Storage Group Lead

A113: Bio Fuels..... Erin Searcy
Bioenergy Technologies Department Manager

A114: Enterprise Systems Modeling for Energy SystemsTammie Borders
ESSAI Program Lead

2:00 p.m. Break

2:15 p.m. Breakout Sessions

A102: Nuclear Materials and Fuels/Advanced Manufacturing..... Dan Wachs
Fuels Safety Testing Technical Lead

A111: Catalysis Anne Gaffney
Process Science and Technology Director

Rebecca Fushimi
Catalysis and Transient Kinetics Lab Lead

A112: Risk Assessment/Reactor Licensing..... Bob Youngblood
Senior Risk Consultant

Marty Sattison
Nuclear Safety and Regulation Research Director

A113: Nuclear Nonproliferation and Nuclear Forensics David Chichester
Nuclear and Radiological Activity Center (NRAC) Research Support and Technology Testing Lead

A114: Experimental Analysis and Modeling for Thermal Energy Storage

..... Piyush Sabharwall
Advanced Heat Transport Lead, Nuclear Staff Scientist

3:15 Break

3:30 p.m. Big Ideas/Breakout Session Outcome Discussion..... Marsha Bala
NUC Deputy Director

5:00 p.m. Adjourn