

# UNLIMITED ENERGY MEETS AN UNLIMITED RESOURCE

## MICHAEL J. DRISCOLL AND NUCLEAR ENGINEERING AT MIT

*A Symposium Sponsored by the  
Department of Nuclear Science and Engineering &  
Center for Advanced Nuclear Energy Systems (CANES)  
Massachusetts Institute of Technology  
Cambridge, Massachusetts, 02139*

*Mezzanine Lounge, MIT Student Center  
April 28-29, 2014*

Tentative Agenda

### **Monday, April 28, 2014**

- 8:00am      *Registration and Continental Breakfast*
- 8:30 am      **Welcome Richard Lester (MIT)**
- 8:45 am      **Practical Reactor Analysis (Chair Jacopo Buongiorno, MIT)**
- Mujid Kazimi (MIT) - Matching Reactors to their Mission
- Edward Pilat (MIT) - A pre-computer View: The Linear Reactivity Theory
- Thomas Downar (U. Michigan) - Computational Reactor Analysis
- George Apostolakis (NRC) – Risk Informed Reactor Design
- 10: 30 am      Break
- 10: 45 am      **Thermal Reactor Engineering (Chair: Emilio Baglietto, MIT)**
- Peter Yarsky (NRC) : Simulating Anticipated Transients without SCRAM in  
                 Boling Water Reactors with Expanded Operating Domains
- Kord Smith (MIT) : The Path Forward for Improved Reactor Analysis.
- Eugene Shwageraus (Cambridge U.): Transmutation Options Thorium and Non-  
                 fertile Fuels.
- Noon              Lunch: Sid Yip (Chair, MIT), Neil Todreas (MIT) , and Mark Goldsmith (Former  
                 President, ASME)
- 1:30 pm      **Fast Reactor Engineering (Chair: Benoit Forget, MIT)**
- Hussain Khalil (ANL) - Optimization of Fast Reactors
- Pavel Hejzlar (Terrapower) - Rethinking the Fast Reactors

- Frank Carre (CEA) - ASTRID: An Advanced Sodium Cooled Reactor
- 3:00 pm Break
- 3:15 pm **Fuel Cycle Front End and Back End (Chair Alan Hanson, MIT)**
- Erich Schneider (U. Texas) - Conventional and Unconventional U resources
- Mike McMahon (AREVA) – Spent Fuel Storage
- Ethan Bates (MIT) - Deep Boreholes for Nuclear Waste: The Promise and the Challenge
- 4:45 pm Break
- 6:00 pm **Reception Le Meridien Hotel, Cambridge**
- 7:00 pm **Dinner** MC Andrew Kadak (Consultant),  
Speakers: Regis Matzie (Consultant), Mike Driscoll (MIT)

**Tuesday, April 29, 2014**

- 8:00 am Registration and Continental Breakfast
- 8:30 am **The Role of University Research Reactors (Chair: Otto Harling, MIT)**
- Gordon Kohse (MIT) – Loops In Small Reactors: The Needs Keep Growing
- Ronald Ballinger (MIT) – National Materials Testing Needs
- Linwen Hu(MIT) - The Next 50 Years of MITR
- 10:00am Break
- 10: 20am **Innovation in Nuclear Plant Technology (Chair: Mike Golay, MIT)**
- Charles Forsberg (MIT) - Nuclear Energy in Hybrid Energy Systems
- Vaclav Dostal (Tech U. Prague) - Innovative Power Cycles
- Paul Chodak (Indiana Mich. Power) – Innovation in Reactor Operations
- Steve Herring (INL) –Offshore Reactors
- 12:15 pm Adjourn.**
- 12:15 pm Lunch Boxes and Lunch Room available with no program.**