Symposium

Nuclear Everywhere?
How new technologies, regulations and policies may finally make the use of nuclear energy mainstream and ubiquitous

March 28-29, 2023
MIT Campus

PROGRAM

TUESDAY, MARCH 28

9:00-9:20 – Greetings
  Ben Forget, Associate Dept. Head, Nuclear Science and Engineering, MIT
  Bob Armstrong, Director, MIT Energy Initiative

9:20-9:50 – Symposium Intro & Objectives
  Jacopo Buongiorno, Director, Center for Advanced Nuclear Energy Systems (CANES), MIT

KEYNOTE
9:50-10:10 – Will SMRs succeed? Requirements for new nuclear technologies in the market place (Maria Korsnick, President and Chief Executive Officer, NEI)

SESSION 1: New Markets and Applications

  Chair: John Parsons, Senior Lecturer, Sloan School of Management, MIT
  10:10-10:30 – Nuclear hydrogen is already here (Ugi Otgonbaatar, Director of Technology Strategy, Constellation)
  10:30-10:50 – Nuclear biofuels: a potential game changer (Charles Forsberg, Principal Research Scientist, MIT)

10:50-11:10 – COFFEE BREAK

11:10-12:30 – Nuclear energy comes to campus. A panel-style discussion on decarbonization of college campuses using microreactors.

  Chair: Lance Sneed, Director of Strategic Development, Nuclear Reactor Laboratory, MIT
  Panelists:
  Jean Paul Allain, Head, Nuclear Engineering Dept., Penn State University
  Seungjin Kim, Chair, Nuclear Engineering Dept., Purdue University
  Rusty Towell, Chair, Engineering and Physics Dept., Abilene Christian University
  Caleb Brooks, Associate Professor of Nuclear, Plasma and Radiological Engineering, UIUC
  Yasir Arafat, MARVEL Chief Designer, Idaho National Laboratory
  Janine Helwig, Director of Utilities, MIT

12:30-1:30 – Lunch
  Lunch Speaker: John Ahlberg, Founder, Kärnfull Energi
SESSION 2: Enabling Technologies

Chair: Koroush Shirvan, Associate Professor of Nuclear Science and Engineering, MIT
1:30-1:50 – Advanced Manufacturing, Passive Safety Systems, Compact heat exchangers, state-of-the-art BOP (Koroush Shirvan, MIT)
1:50-2:10 – Advanced Fuels and Moderators (Ellen Cerreta, Materials Scientist, Los Alamos National Laboratory)
2:10-2:30 – Life cycle assessment of graphite including disposal (Lance Snead, MIT)

2:30-2:50 – COFFEE BREAK

2:50-3:10 – 3D seismic isolation (Andrew Whittaker, Professor of Civil Structural and Environmental Engineering, University of Buffalo)
3:10-3:30 – Technology synergies with fusion (Steve Zinkle, Professor of Nuclear Engineering, University of Tennessee at Knoxville)

4:15-5:30 – MIT REACTOR TOUR AND SIMULATOR

6:00-10:00 – BANQUET at Samberg Center
   Dinner Speaker: Katy Huff, Director, Office of Nuclear Energy, US Department of Energy

WEDNESDAY, MARCH 29

SESSION 3: Regulations, Policy and Geopolitical Context

9:00-10:45 – Is the US Government doing enough to enable a substantial expansion of the domestic nuclear industry? A panel-style discussion on nuclear R&D, regulations and export.

Chair: Lin-wen Hu, Senior Scientist, Nuclear Reactor Lab, MIT
Panelists:
Alice Caponiti, Deputy Assistant Secretary for Reactor Fleet and Advanced Reactor Deployment, Office of Nuclear Energy, US Department of Energy
Jeff Chamberlin, Associate Assistant Deputy Administrator, Office of Material Management and Minimization, NNSA
John Kotek, Senior Vice President, Policy Development and Public Affairs, NEI
Rita Baranwal, Chief Technology Officer, Westinghouse Electric Company
Edward Blandford, Chief Technology Officer, Kairos

10:45-11:00 – COFFEE BREAK

11:00-12:30 – Fuel and waste: where do we stand? A panel-style discussion on HALEU, new fuel forms and HLW management for existing and new nuclear reactors

Chair: Haruko Wainwright, Assistant Professor of Nuclear Science and Engineering, MIT
Panelists:
Sam Brinton, Deputy Assistant Secretary, Office of Spent Fuel and Waste Disposition, US DOE
Monica Regalbuto, Head, Nuclear Fuel Cycle Strategy, INL
David Sassani, National Technical Director, Spent fuel and Waste Science, Sandia National Laboratories
Jose Reyes, Chief Technology Officer, NuScale

12:30 – Adjourn