ANS Annual Meeting

2020

Official Program

June 8-11, 2020
Virtual Meeting

Countdown to 2030

Framing the Nuclear Technology Agenda for the Next 10 Years

ANS | Annual Meeting 2020

Countdown to 2030:
Framing the Nuclear Technology Agenda for the Next 10 Years

A Special Thank You to our Organization Participants

Exelon Generation

INL — Idaho National Laboratory

OAK RIDGE National Laboratory

Argonne NATIONAL LABORATORY

NEI NUCLEAR ENERGY INSTITUTE

Los Alamos NATIONAL LABORATORY — EST. 1943

GAIN — Gateway for Accelerated Innovation in Nuclear

NRIC — National Reactor Innovation Center

LWRS — LIGHT WATER REACTOR SUSTAINABILITY

VTR VERSATILE TEST REACTOR

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Studsvik

TerraPower INSTITUTE FOR NUCLEAR ENERGY SYSTEMS

GSE SOLUTIONS

TELEDYNE BROWN ENGINEERING Everywhereyoulook

MAXETA — MAXETA TECHNOLOGIES

Pacific Northwest NATIONAL LABORATORY

Southern Nuclear

Deltech Kiln and Furnace Design, LLC.

WSC Innovative Simulation Solutions www.ws-corp.com

PennState College of Engineering

KEN AND MARY ALICE LINDQUIST DEPARTMENT OF NUCLEAR ENGINEERING

Organizational participant packages with complimentary registrations are available. Contact Jeff Mosses to learn more

Table of Contents

Meeting Officials

Countdown to 2030:
Framing the Nuclear Technology Agenda for the Next 10 Years

2020 Annual Meeting

GENERAL CHAIR:

Mark Peters (Idaho National Laboratory)

ASSISTANT GENERAL CHAIRS:

Harsh Desai (Nuclear Energy Institute)
Corey McDaniel (Idaho National Laboratory)

TECHNICAL PROGRAM CHAIR:

Kevin O'Kula (Amentum Technical Services)

ASSISTANT TECHNICAL PROGRAM CHAIR:

Nicholas R. Brown (University of Tennessee, Knoxville)

Daily Schedule

Monday, June 8

10:00-11:30 am (EDT)	Opening Plenary: Keynote Panel
11:30 am-12:30 pm (EDT)	Opening Plenary: Utility Roundtable: U.S. Leadership in Sustaining Clean, Competitive Power and Hydrogen
1:00-3:10 pm (EDT)	Technical Sessions

- Nuclear Installations Safety: General—I
- Training, Human Performance and Workforce Development
- Nuclear Energy and Climate Change Policy in the US and Abroad in a Post-Pandemic World
- Waste Management and Fuel Cycle Innovation Challenges for Advanced Nuclear Reactors
  - Gen IV (Including International Perspectives)-Panel
- Experimental Thermal Hydraulics—I
- Accident Tolerant Fuels
- Fuels and Materials for Molten Salt Reactors
- Current Issues in Computational Methods–Roundtable
- Reactor Physics: General
- Data, Analysis and Operations in Nuclear Criticality Safety—I

3:30-5:15 pm (EDT)	Technical Sessions

- Current Topics in Probabilistic Risk Analysis
- Topics in Advanced Instrumentation
- General Thermal Hydraulics
- Characterization, Storage, and Transportation of Used Nuclear Fuel
- Two-Phase Flow and Heat Transfer Fundamentals
- Prospects for Blockchain Technology in International Security/Safeguards–Panel
- Nuclear Science User Facilities and Fuels and Materials for Molten Salt Reactors
- Building Your Leadership Competency–Panel
- Transformational Challenge Reactor

Daily Schedule

10:00-11:30am (EDT)	ANS President's Special Session: 2030: US Global Leadership in Nuclear Energy and National Security
12:00-2:10pm (EDT)	Technical Sessions

- Nuclear Installations Safety: General—II
- Communicating Safety & Risk to the Public–Panel
- Isotopes and Radiation: General
- Computational Thermal Hydraulics—I
- Radiation Protection and Shielding: General
- In-Pile Testing of Nuclear Fuels and Materials
- Transport Methods
- Sharing of Good Industry Practices and/or Lessons Learned in Nuclear Criticality Safety -Panel

2:30-4:15pm (EDT) Technical Sessions

- Cyber Security for Nuclear Power Installations—I
- Cutting Edge Techniques in Education, Training and Distance Education
- Thermal Hydraulics Activities for the Versatile Test Reactor
- Computational Methods for Radiation Protection and Shielding
- Advanced Manufacturing/Additive Manufacturing—I
- Monte Carlo and Multiphysics
- Reactor Analysis Methods—I
- Resume/CV Workshop
- Uranium Mine Remediation–Panel

4:35-6:20pm (EDT) Technical Sessions

- Cyber Security for Nuclear Power Installations—II
- Waste Disposal Solutions in a Country with No HLW Repository–Panel
- From CAD to Transport for Radiation Protection and Shielding Calculations
- Advanced Manufacturing/Additive Manufacturing—II
- Radiation Transport Software
- Reactor Physics of Micro Reactors for Terrestrial and Space Applications—I
- Focus on Communications–Panel
- Pitch Your Job–Panel

Daily Schedule

Wednesday, June 10

10:00 am-12:00 pm (EDT)	General Chair's Special Session: The Promise of Advanced Reactors during Uncertain Times: National Security, Jobs and Clean Energy
12:00-2:10 pm (EDT)	Technical Sessions • General Topics in Instrumentation and Controls and Human Factors • General Topics in Decommissioning • Energy Storage Systems and Integration with NPPs—I • Chemical Treatment of Radioactive Waste • Sensors and In-Pile Instrumentation • Challenges and Opportunities in Thermal Hydraulics of High Temperature Gas Cooled Reactors–Panel • Meeting the Challenges in Non-LWR PRA Standard Development–Panel • Acceleration Methods • Reactor Physics of Advanced Reactors • Balancing Competition and National Needs in the Medical Isotopes Market–Panel
2:30-4:15 pm (EDT)	Technical Sessions • Online Monitoring and Prognostics • Energy Storage Systems and Integration with NPPs—II • Thermal Hydraulics of Nuclear Micro-Reactors and MSR • Managing Hydrogen Systems in Nuclear Facilities: Lessons Learned from the DOE Complex and Industry–Panel • Accelerated Materials Discovery • Aging of Materials • Reactor Analysis Methods—II • ANS-8 Standards Forum • Innovating Nuclear Through an Entrepreneurial Student Prize Competition
4:35-6:20 pm (EDT)	Technical Sessions • Digital Instrumentation and Control • Operations and Power: General • Fuel Cycle and Waste Management: General • Computational Thermal Hydraulics—II • Nuclear Fuels—I • Sensitivity, Uncertainty, and Machine Learning • Reactor Physics of Micro Reactors for Terrestrial and Space Applications—II • New Developments in Shipping Packages Related to Criticality Safety–Panel

Daily Schedule

Thursday, June 11

10:00-11:45 am (EDT)	Technical Sessions • Experimental Thermal Hydraulics—II • ANS Position Statement on the Use of Low Enriched Uranium in Space–Panel • Nuclear Fuels—II • Robotics and Remote Systems: General • Reactor Analysis Methods—III • Data, Analysis and Operations in Nuclear Criticality Safety—II
12:15-2:00 pm (EDT)	Technical Sessions • Nuclear Fuels—III • Reactor Physics Design, Validation and Operational Experience • Data, Analysis and Operations in Nuclear Criticality Safety—III • Why the STEM Community Should Run for Office and How to Do It

General Information

ABOUT ANS

Mission

ANS provides its members with opportunities for professional development. It also serves the nuclear community by creating a forum for sharing information and advancements in technology, and by engaging the public and policymakers through communication outreach.

Statement on Diversity

The American Nuclear Society (ANS) is committed, in principle and in practice, to creating a diverse and welcoming environment for everyone interested in nuclear science and technology. Diversity means creating an environment – both in ANS and in the profession – in which all members are valued equitably for their skills and abilities and respected equally for their unique perspectives and experiences. Diverse backgrounds foster unique contributions and capabilities, and so creation of an inclusive Society ultimately leads to a more creative, effective, and technically respected Society.

ANS believes that everyone deserves opportunities for learning, networking, leadership, training, recognition, volunteering in Society activities, and all the other benefits that involvement in the Society brings, regardless of age, color, creed, disability, ethnicity, gender identity and expression, marital status, military service status, national origin, parental status, physical appearance, race, religion, sex, or sexual orientation. The selection of a member to serve in ANS's volunteer leadership structure shall be based solely on the member's ability, interest, and commitment to serve. In particular, ANS encourages members at each level of the Society and in each Professional Division and Technical Group to make special efforts to recruit underrepresented minorities and women to ensure that they are adequately represented in the Society.

Respectful Behavior Policy (Abbreviated)

The open exchange of ideas, freedom of thought and expression, and productive scientific debate are central to the mission of the American Nuclear Society (ANS). These require an open and diverse environment that is built on dignity and mutual respect for all participants and ANS staff members, and is free of bias and intimidation.

ANS is dedicated to providing a safe, welcoming, and productive experience for everyone participating in Society events and other Society activities regardless of age, color, creed, disability, ethnicity, gender identity and expression, marital status, military service status, national origin, parental status, physical appearance, race, religion, sex, or sexual orientation. Creation of a safe and welcoming environment is a shared responsibility held by all participants. Therefore, ANS will not tolerate harassment of or by participants (including ANS volunteer leaders and staff members) in any form. Disciplinary action for participants found to have violated this principle may include reprimand, expulsion from an event or activity with or without a refund, temporary or permanent exclusion from all ANS events and activities, suspension or expulsion from volunteer leadership positions or groups, and/or suspension or expulsion from Society membership, as appropriate.

If you or someone else experiences harassment, regardless of how you otherwise choose to initially handle the situation, you are encouraged to report the situation to ANS. It is possible that the behavior you experienced is part of a larger pattern of repeated harassment. Please alert ANS to behavior you feel to be harassment regardless of the offender's identity or standing in the Society.

The complete Respectful Behavior Policy can be found at www.ans.org/about/rbp.

General Information

ANS CODE OF ETHICS

Preamble

Recognizing the profound importance of nuclear science and technology in affecting the quality of life throughout the world, members of the American Nuclear Society (ANS) are committed to the highest ethical and professional conduct.

Fundamental Principle

ANS members as professionals are dedicated to improving the understanding of nuclear science and technology, appropriate applications, and potential consequences of their use.

To that end, ANS members uphold and advance the integrity and honor of their professions by using their knowledge and skill for the enhancement of human welfare and the environment; being honest and impartial; serving with fidelity the public, their employers, and their clients; and striving to continuously improve the competence and prestige of their various professions.

ANS members shall subscribe to the following practices of professional conduct:

Principles of Professional Conduct

1. We hold paramount the safety, health, and welfare of the public and fellow workers, work to protect the environment, and strive to comply with the principles of sustainable development in the performance of our professional duties.

2. We will formally advise our employers, clients, or any appropriate authority and, if warranted, consider further disclosure, if and when we perceive that pursuit of our professional duties might have adverse consequences for the present or future public and fellow worker health and safety or the environment.

3. We act in accordance with all applicable laws and these Practices, lend support to others who strive to do likewise, and report violations to appropriate authorities.

4. We perform only those services that we are qualified by training or experience to perform, and provide full disclosure of our qualifications.

5. We present all data and claims, with their bases, truthfully, and are honest and truthful in all aspects of our professional activities. We issue public statements and make presentations on professional matters in an objective and truthful manner.

6. We continue our professional development and maintain an ethical commitment throughout our careers, encourage similar actions by our colleagues, and provide opportunities for the professional and ethical training of those persons under our supervision.

7. We act in a professional and ethical manner towards each employer or client and act as faithful agents or trustees, disclosing nothing of a proprietary nature concerning the business affairs or technical processes of any present or former client or employer without specific consent, unless necessary to abide by other provisions of this Code or applicable laws.

8. We disclose to affected parties, known or potential conflicts of interest or other circumstances, which might influence, or appear to influence, our judgment or impair the fairness or quality of our performance.

9. We treat all persons fairly.

10. We build our professional reputation on the merit of our services, do not compete unfairly with others, and avoid injuring others, their property, reputation, or employment.

11. We reject bribery and coercion in all their forms.

12. We accept responsibility for our actions; are open to and acknowledge criticism of our work; offer honest criticism of the work of others; properly credit the contributions of others; and do not accept credit for work not our own.

Plenary Sessions

Opening Plenary: Keynote Panel and Utility Roundtable
Keynote Panel
Time: 10:00 am-11:30 am (EDT)

Marilyn Kray
(President, ANS)

Craig Piercy
(Executive Director/CEO, ANS)

Dan Brouillette
(U. S. Department of Energy)

William D. Magwood, IV
(OECD Nuclear Energy Agency)

Kathryn McCarthy
(US ITER project)

Utility Roundtable: U.S. Leadership in Sustaining Clean, Competitive Power and Hydrogen
Time: 11:30 am-12:30 pm (EDT)

This roundtable discussion will feature representatives from utilities awarded funding through DOE's Light Water Reactor Sustainability Program to demonstrate hydrogen production at existing LWR plants. The speakers will provide their perspectives on the first-of-a-kind projects that represent a significant opportunity to improve the long-term economic competitiveness of the current LWR fleet by providing experience and insights on the production of clean hydrogen in addition to electricity at operating nuclear power plants.

Moderators

Alison Hahn
(U. S. Department of Energy)

Bruce Hallbert
(Idaho National Laboratory)

Panel

Alan Scheanwald
(Energy Harbor)

Patrick Burke
(Xcel Energy)

Scot Greenlee
(Exelon Nuclear)

Michael Green
(Pinnacle West Capital Corporation)

Plenary Sessions

ANS President's Special Session: 2030: US Global Leadership in Nuclear Energy and National Security
Time: 10:00-11:30 am (EDT)

Nuclear technology provides numerous benefits to American society as a reliable, clean source of electricity. Additionally, nuclear technology strengthens national security. The ability to expand our nuclear fleet is crucial for maintaining American influence in the global nuclear industry. Educational institutions create a pipeline for people to become experts in nuclear nonproliferation, safeguards, and international treaty verification necessary for this expansion. In this session, we will look at the current influence of nuclear technology on American national security and where the country stands in leading the future global nuclear industry. Fast-forward ten years, what should U.S. nuclear interests be, and what role should the U.S. play in the worldwide development of nuclear technology while strengthening national security? The multitude of stakeholders involved in nuclear science are all working towards the improvement of the current and future status of nuclear energy, technology, and policy in the U.S. But what is this shared goal, and what path should be taken to get there?

Chair

Marilyn Kray
(President, ANS)

Moderators

Kelley Verner
(ANS Student Sections Committee Chair)

Kelsey Amundson
(ANS Young Members Group Secretary)

Speakers

Maria Korsnick
(Nuclear Energy Institute)

Laura S. H. Holgate Ambassador (ret.)
(Nuclear Threat Initiative)

Siegfried Hecker
(Stanford University)

Rita Baranwal
(U.S. Department of Energy)

Plenary Sessions

General Chair's Special Session: The Promise of Advanced Reactors during Uncertain Times: National Security, Jobs and Clean Energy
Time: 10:00-12:00 pm (EDT)

Lab Director's Roundtable
National Laboratory Directors will discuss the role U.S. leadership will play in seeing advanced reactor innovations developed, demonstrated and deployed by 2030.

Mark Peters
(Idaho National Laboratory)

Thom Mason
(Los Alamos National Lab)

Thomas Zacharia
(Oak Ridge National Laboratory)

Paul Kearns
(Argonne National Laboratory)

Advanced Reactor Panel
Leaders of advanced reactor innovation will discuss the challenges and opportunities for the U.S. to share the benefits of clean, secure, reliable power with the world.

Moderator

Christine King
(Gateway for Accelerated Innovation in Nuclear (GAIN))

Panel

Chris Levesque
(TerraPower)

Ashley Finan
(National Reactor Innovation Center) (NRIC)

Kemal Pasamehmetoglu
(Versatile Test Reactor)

Clay Sell
(X-energy)

Ray Rothrock
(Partner Emeritus at Venrock, Venture Capitalist)

Technical Sessions by Division

AEROSPACE NUCLEAR SCIENCE AND TECHNOLOGY (ANSTD)

ANS Position Statement on the Use of Low Eneriched Uranium in Space–Panel, Thurs

DECOMMISSIONING AND ENVIRONMENTAL SCIENCES (DESD)

Nuclear Energy and Climate Change Policy in the US and Abroad in a Post-Pandemic World–Panel, Mon

Uranium Mine Remediation–Panel, Tue

General Topics in Decommissioning, Wed

EDUCATION, TRAINING, AND WORKFORCE DEVELOPMENT (ETWDD)

Training, Human Performance, and Workforce Development, Mon

Focus on Communications–Panel, Tue

Cutting Edge Techniques in Education, Training and Distance Education, Tue

FUEL CYCLE AND WASTE MANAGEMENT (FCWMD)

Waste Management and Fuel Cycle Innovation Challenges for Advanced Nuclear Reactors - Gen IV (Including International Perspectives)–Panel, Mon

Characterization, Storage, and Transportation of Used Nuclear Fuel, Mon

Waste Disposal Solutions in a Country with No HLW Repository–Panel, Tue

Chemical Treatment of Radioactive Waste, Wed

Fuel Cycle and Waste Management: General, Wed

HUMAN FACTORS, INSTRUMENTATION, AND CONTROLS (HFICD)

Topics in Advanced Instrumentation, Mon

Cyber Security for Nuclear Power Installations—I, Tue

Cyber Security for Nuclear Power Installations—II, Tue

General Topics in Instrumentation and Controls and Human Factors, Wed

Online Monitoring and Prognostics, Wed

Digital Instrumentation and Control, Wed

ISOTOPES AND RADIATION (IRD)

Isotopes and Radiation: General, Tue

MATERIALS SCIENCE AND TECHNOLOGY (MSTD)

Accident Tolerant Fuels, Mon

Fuels and Materials for Molten Salt Reactors, Mon

Nuclear Science User Facilities and Fuels and Materials for Molten Salt Reactors, Mon

In-Pile Testing of Nuclear Fuels and Materials, Tue

Advanced Manufacturing/Additive Manufacturing—I, Tue

Advanced Manufacturing/Additive Manufacturing—II, Tue

Sensors and In-Pile Instrumentation, Wed

Accelerated Materials Discovery, Wed

Aging of Materials, Wed

Nuclear Fuels—I, Wed

Nuclear Fuels—II, Thu

Nuclear Fuels—III, Thu

MATHEMATICS AND COMPUTATION (MCD)

Current Issues in Computational Methods–Roundtable, Mon

Transport Methods, Tue

Monte Carlo and Multiphysics, Tue

Radiation Transport Software, Tue

Acceleration Methods, Wed

Sensitivity, Uncertainty, and Machine Learning, Wed

NUCLEAR CRITICALITY SAFETY (NCSD)

Data, Analysis, and Operations in Nuclear Criticality Safety—I, Mon

Data, Analysis, and Operations in Nuclear Criticality Safety—II, Thu

Data, Analysis, and Operations in Nuclear Criticality Safety—III, Thu

Sharing of Good Industry Practices and/or Lessons Learned in Nuclear Criticality Safety–Panel, Tue

Balancing Competition and National Needs in the Medical Isotopes Market–Panel, Wed

ANS-8 Standards Forum, Wed

New Developments in Shipping Packages Related to Criticality Safety–Panel, Wed

NUCLEAR INSTALLATIONS SAFETY (NISD)

Nuclear Installations Safety: General—I, Mon

Current Topics in Probabilistic Risk Analysis, Mon

Nuclear Installations Safety: General—II, Tues

Managing Hydrogen Systems in Nuclear Facilities: Lessons Learned from the DOE Complex and Industry–Panel, Wed

Meeting the Challenges in Non-LWR PRA Standard Development–Panel, Wed

Technical Sessions by Division

NUCLEAR NONPROLIFERATION (NNPD)

Prospects for Blockchain Technology in International Security/Safeguards–Panel, Mon

OPERATIONS AND POWER (OPD)

Operations and Power: General, Wed

Energy Storage Systems and Integration with NPPs—I, Wed

Energy Storage Systems and Integration with NPPs—II, Wed

RADIATION PROTECTION AND SHIELDING (RPSD)

Radiation Protection and Shielding: General, Tue

Computational Methods for Radiation Protection and Shielding, Tue

From CAD to Transport for Radiation Protection and Shielding Calculations, Tue

REACTOR PHYSICS (RPD)

Reactor Physics: General, Mon

Transformational Challenge Reactor—I, Mon

Reactor Analysis Methods—I, Tue

Reactor Physics of Micro Reactors for Terrestrial and Space Applications—I, Tue

Reactor Physics of Advanced Reactors, Wed

Reactor Physics of Micro Reactors for Terrestrial and Space Applications—II, Wed

Reactor Physics Design, Validation, and Operational Experience, Wed

Reactor Physics of Advanced Reactors, Wed

Reactor Analysis Methods—II, Wed

Reactor Analysis Methods—III, Thu

Reactor Physics Design, Validation and Operational Experience, Thu

ROBOTICS AND REMOTE SYSTEMS (RRSD)

Robotics and Remote Systems: General, Thu

THERMAL HYDRAULICS (THD)

Experimental Thermal Hydraulics—I, Mon

Two-Phase Flow and Heat Transfer Fundamentals, Mon

General Thermal Hydraulics, Mon

Computational Thermal Hydraulics—I, Tue

Thermal Hydraulics Activities for the Versatile Test Reactor, Tue

Computational Thermal Hydraulics—II, Wed

Thermal Hydraulics of Nuclear Micro-Reactors and MSR, Wed

Challenges and Opportunities in Thermal Hydraulics of High Temperature Gas Cooled Reactors–Panel, Wed

Experimental Thermal Hydraulics—II, Thu

YOUNG MEMBERS GROUP (YMG)

Building Your Leadership Competency–Panel, Mon

Communicating Safety & Risk to the Public, Tue

Resume/CV Workshop, Tue

Carbon pricing and clean energy standards 101, Tue

Pitch your Job_Panel, Tues

Innovating Nuclear through an Entrepreneurial Student Prize Competition, Wed

Why the STEM Community Should Run for Office and How to Do It, Thurs

MONDAY, JUNE 8
TECHNICAL SESSIONS - 1:00 PM (EDT)

Nuclear Installations Safety: General—I
Sponsored by NISD. Session Organizer: Zachary Jankovsky *(SNL)*
Chairs: Matt Denman *(Kairos Power)*, Andrew Clark *(Sandia)*

Summary of the Reduction of Severe Accident Uncertainties (ROSAU) Project, J. R. Licht, S. Lomperski, N. Bremer, M. T. Farmer *(ANL)*, S. Basu *(US NRC, retired)*

Development of Integrated Mechanistic Source Term Assessment Software for Liquid Metal Reactors, Matthew Bucknor, Acacia J. Brunett, James L. Jerden, David Grabaskas, Daniel J. O'Grady, Adam J. Dix *(ANL)*

Methodology for Selecting Advanced Reactor Licensing Pathways, R. Patrick White *(MIT)*

Evaluation of Flow Boiling Transient Critical Heat Flux Experiment and Simulation, Soon K. Lee, Nicholas R. Brown *(Univ. of Tenn., Knoxville)*

Training, Human Performance and Workforce Development
Sponsored by ETWDD. Session Organizer: Lisa M. Marshall *(NCSU)*
Chairs: James Baciak, Blair Bromley *(CNL)*

Nuclear Science Training for Secondary School Teachers at Argonne National Laboratory - 2019, David Grabaskas, Sunaree Hamilton *(ANL)*, Gerald Reyes *(IAEA)*, Micah Pacheco *(Dept. of Education, Philippines)*, Habibah Adnan *(Malaysian Nuclear Agency)*, John Domyancich, DeeDee Rudisel, Natalie Zender *(ANL)*

Digital Assistant Tool for Long Term Operation of Aging Assets, Micah Tinklepaugh, Emma Wong *(EPRI)*

Innovative Way to Save Tens of Millions of Dollars and Improve Plant Performance, Gary R. Cavanaugh, Bruce W. O'Brien *(Marathon Consulting Group)*

Nuclear Energy and Climate Change Policy in the US and Abroad in a Post-Pandemic World
Sponsored by DESD; Cosponsored by OPD. Session Organizer and Chair: Leah Parks *(NRC)*; **Vice Chair:** Laura Hermann

Emission-reduction policies should neither favor nor limit any one energy source over another. Instead, such policies should evaluate energy sources based upon their ability to contribute reliably to meeting emission-reduction targets. Furthermore, a post-pandemic world is likely to influence public sentiment about the environment, risk assessment and consumerism. How we set and achieve climate changes goals will be radically altered for the foreseeable future.

This panel will cover recent initiatives at the international, federal, state and local levels that allow nuclear to play a role addressing climate change. Experts will share their experiences working with the IPCC, The Clean Energy Ministerial and other international efforts. Also, discussion will explore community-level efforts to implement regional future clean energy portfolios.

Join international experts, utility leaders, representatives from academia, and social scientists for an interactive discussion on recent policy approaches to help achieve intended emission-reduction targets, and how new approaches may emerge post-COVID-19. Panelists will discuss the ways community leaders influence energy policy. They will also share how, from climate change goals to the broader sustainability agenda, their communications have been influenced by the public health crisis.

Panelists:
Valerie Faudon *(French Nuclear Society)*
John Kelly *(ANS President 2018- 2019)*
Bill Burchill *(ANS President 2008-2009)*
Matt Crozat *(Nuclear Energy Institute)*
Michael Green *(Pinnacle West)*
Martin Pasqualetti *(Arizona State University)*
Eric Drummond *(Global City Teams Challenge)*

Waste Management and Fuel Cycle Innovation Challenges for Advanced Nuclear Reactors—Gen IV (Including International Perspectives)–Panel
Sponsored by FCWMD; Cosponsored by OPD. Session Organizer: Steve Napier *(National Nuclear Laboratory)*
Chair: Steve Napier *(National Nuclear)*, Tim Tinsley *(UKNNL)*

With the move to a clean energy agenda internationally there is an increased focus on advanced reactor technologies that provide flexible power, heat, hydrogen and desalination solutions. With any new reactor system there is an associated fuel Cycle that accompanies it. This international panel explores the spent fuel and overall fuel cycle challenges that need to be addressed for these new reactor types to be successfully deployed in a timescale that will meet the market demand. There will be a particular focus on where future fuel cycles and waste management requirements may be significantly different to the current systems, and therefore the need for future research and innovation. It will explore current international research and innovation programs and the areas where international collaboration can contribute and accelerate the programs.

Panelists:
Paul Nevitt *(UK National Nuclear Laboratory)*
Dan Mathers *(UK Nuclear Innovation and Research Office)*
Jack D. Law *(INL)*
Sal Golub *(U.S. DOE)*
Andrew Worrall *(ORNL)*
TBD

Experimental Thermal Hydraulics—I
Sponsored by THD. Session Organizer: Jun Wang *(U.W., Madison)*
Chair: Marilyn Delgado *(Texas A&M)*, Guillaume Mignot *(Oregon State)*

Experimental Quantification of Form Drag on Rising Bubbles Using PIV, Alexander Duenas, Isaiah Wieland, Wade Marcum, Qiao Wu *(Oregon State Univ.)*

Design of a Pebble Bed Heat Transfer Separate Effects Test, Jacob Uselman, Izabela Gutowska, Joshua Halsted, Shikha Kumar, Connor Dionne, Brian Woods *(Oregon State Univ.)*, Nicolas Zwiebaum, Kyle Brumback *(Kairos Power, LLC)*

Investigation of the Influence of the Bundle Geometry Distortion on the Critical Heat Flux, Daniya Kireeva, Dmitry Oleksyuk *(NRC Kurchatov Institute)*

Accident Tolerant Fuels
Sponsored by MSTD Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Chaitanya Deo

Impact of Fission Product Content on Phase Development in U_3Si_2 Fuel, Kaitlin E. Johnson *(Univ. of South Carolina)*, Denise L. Adorno *(Westinghouse Electric Sweden)*, Vancho Kocevski, Tashiema L. Ulrich, Joshua T. White *(LANL)*, Antoine Claisse *(Westinghouse Electric Sweden)*, Jacob W. McMurray *(ORNL)*, Theodore M. Besmann *(Univ. of South Carolina)*

An Alternative Synthesis Route to U_3Si_2, Adrian Gonzales, Elizabeth Sooby Wood *(Univ. of Texas, San Antonio,)*, Kent Coulter *(Southwest Research Institute)*

Failure Behavior of Nuclear-grade FeCrAl Cladding under Simulated Pellet-cladding Mechanical Interaction Conditions, B. Garrison, R. R. Lowden *(ORNL)*, M. N. Cinbiz *(ORNL/INL)*, N. R. Brown *(Univ. of Tenn., Knoxville)*, K. Linton *(ORNL)*

MONDAY, JUNE 8
TECHNICAL SESSIONS - 1:00 PM (EDT)

Fuels and Materials for Molten Salt Reactors
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Troy Munro *(BYU)*

The Molten Salt Thermodynamic Database *(MSTDB)*: A Resource for MSR Design, Development, and Regulation, Theodore M. Besmann, Johnathon C. Ard, Kaitlin E. Johnson, Matthew S. Christian, Jacob A. Yingling *(Univ. of South Carolina)*, Jake W. McMurray *(ORNL)*

Thermodynamic Insights Into Corrosion in $NaCl-LiCl-UCl_3-UCl_4$ Molten Salt, Jacob A. Yingling, Theodore M. Besmann, Johnathon C. Ard, Kaitlin E. Johnson, Matthew S. Christian *(Univ. of South Carolina)*, Jake W. McMurray *(ORNL)*

Conceptual Design of the Versatile Experimental Salt Irradiation Loop *(VESIL)* in the Advanced Test Reactor, Abdalla Abou-Jaoude *(INL)*, Sandesh Bhaskar *(NC State Univ.)*, Calvin Downey *(INL)*

Current Issues in Computational Methods–Roundtable
Sponsored by MCD. Session Organizer and Chair: Robert E. Grove *(ORNL)*
Vice Chair: Steve Hamilton *(ORNL)*

This discussion will involve several invited panelists to discuss issues of immediate concern to the mathematics and computation community.

Panelists TBD

Reactor Physics: General
Sponsored by RPD. Session Organizer: Massimiliano Fratoni
Chair: Pavel V. Tsvetkov *(Texas A&M)*

From Nuclear Data to Reactor Design, Vladimir Sobes *(Univ. of Tenn.)*, Luiz Leal *(Institut de radioprotection et de sûreté nucléaire)*, Benoit Forget *(MIT)*, Barry Ganapol *(The Univ. of Arizona)*

Verification of Predicted Energy Deposition Using CASMO5 Coupled Neutron-Gamma Transport Solutions for Selected VERA Benchmark Problems, Rodolfo Ferrer, Joshua Hykes, Charles Wemple *(Studsvik Scandpower)*

University of Tennessee Fast Neutron Source Design History, J. Wesley Hines, John Pevey, Ondrej Chvala, Vlad Sobes *(Univ. of Tenn.)*

Data, Analysis and Operations in Nuclear Criticality Safety—I
Sponsored by NCSD. Session Organizer: Vladimir Sobes *(U.T., Knoxville)*
Chair: John Bess *(INL)*, William Cook *(SANDIA)*

NCS Design and Evaluation of New High-density Storage Containers, Amber McCarthy *(Consolidated Nuclear Security)*

ANSI/ANS-8.7 Applications for the Storage of Criticality Control Overpacks, Brittany M. Williamson *(Savannah River Nuclear Solutions)*

A Parametric Study of Uranium Sensitivity in an Aqueous Separations Simulation, Camden Blake *(Rensselaer Polytechnic Institute)*, Tracy Stover *(Savannah River Nuclear Solutions, LLC)*

Current Topics in Probabilistic Risk Analysis
Sponsored by NISD. Session Organizer: Zachary Jankovsky *(SNL)*
Chair: Zach Jankovsky *(SNL)*, Matt Denman *(Kairos Power)*

Potential Improvements in Human Error Probability Seed Optimizer Algorithms, Nathan R. DeKett *(Enercon Services)*

Projecting Top Event Frequencies using a Pareto Distribution Model, Nathan R. DeKett *(Enercon Services)*

Flammable Gas Controls on 56 Million Gallons of Radioactive Waste at DOE Hanford, T. Albert Hu *(U.S. Department of Energy)*

Topics in Advanced Instrumentation
Sponsored by HFICD. Session Organizer: Jamie Baalis Coble *(U.T., Knoxville)*
Chair: Brenden Heidrich *(INL)*, Brent Shumaker *(AMS-Corp)*

Temperature Sensor Technology Gaps for Nuclear Environments, Dan Floyd *(Univ. of Tenn., Knoxville)*, N. Dianne Bull Ezell *(ORNL)*, Richard T. Wood *(Univ. of Tenn., Knoxville)*

A Wireless Resonance Inductive-Capacitive Sensor System for Nuclear Reactor, Yuan Gao, Jerry Potts, Heng Ban *(Univ. of Pittsburgh)*, Daniel Wachs *(INL)*

Electromagnetic Coupling for Wireless Signal Transmission in Nuclear Reactors, Jerry Potts, Yuan Gao, Heng Ban *(Univ. of Pittsburgh)*, Daniel Wachs *(INL)*

Embedding Sensors in Metal and Ceramic Structures, Christian M. Petrie *(ORNL)*

General Thermal Hydraulics
Sponsored by THD. Session Organizer: Jun Fang *(ANL)*
Chair: Wade Marcum *(Oregon State)*, Seung Jun Kim *(LANL)*

Improvement of Advanced Nuclear Reactor Safety Analysis Codes Using CFD, Rohan Biwalkar, Sola Talabi *(Pittsburgh Technical LLC)*, Kenneth Redus *(Redus and Associates LLC)*

CFD Modeling of Hot-Channel for Potential High-Power Configuration of Missouri S&T Reactor Thaqal Alhuzaymi *(King Abdulaziz City for Science and Technology)*, Ayodeji B. Alajo, Joshua Schlegel *(Missouri Univ. of Science and Technology)*

Study on Selecting Conservative Axial Power Shape for DNBR Design Limit, Shane Park *(KEPCO Nuclear Fuel)*

Theoretical Exploration of Heat Transfer Characteristics of Liquid Metals, Yaou Shen, Shinian Peng, Mingyu Yan, Yu Zhang, Jian Deng *(Nuclear Power Institute of China)*

MONDAY, JUNE 8
TECHNICAL SESSIONS - 3:30 PM (EDT)

Characterization, Storage, and Transportation of Used Nuclear Fuel
Sponsored by FCWMD. Session Organizer: Sven O. Bader *(Orano)*
Chair: Christina Leggett, Stephanie Bruffey *(ORNL)*

Analysis of Potential Standardized Canister Deployments at Commercial US Nuclear Reactor Sites
Robby Joseph, Riley Cumberland, Rob Howard *(ORNL)*

Rapid Analytic Determination of Dry Cask Storage Canister Internal Temperatures, Evan T. Palmer, Iza G. Lantgios, Matthew M. Barry *(Univ. of Pittsburgh)*

Development of a CFD Model for the Drying of Aluminum-clad Spent Fuel, Nathaniel Cooper *(Univ. of South Carolina)*, Tanvir Farouk, Jamil Khan, Yi Wang, Rebecca Smith *(INL)*, Travis Knight *(Univ. of South Carolina)*

Inverse Depletion of Used Nuclear Fuel: a Bayesian Approach, Bassam A. Khuwaileh, Fatima I. Al-Hamadi, Mohammad A. Al-Shabi, Walid A. Metwally *(Univ. of Sharjah)*

Two-Phase Flow and Heat Transfer Fundamentals
Sponsored by THD. Session Organizer: Bao-Wen Yang
Chair: Matthew Zimmer *(NCSU)*, Seugnjin Kim *(Purdue)*

CFD Analysis of PRHR-Heat Exchanger Using Euler Multiphase Model, Soumitra Vadnerkar, Xue Yang *(Texas A&M Univ., Kingsville)*

Artificial Intelligence-based Phase-Change Regime Classification of Acoustic Emission Detection in Pool Boiling, Do Yeong Lim, In Cheol Bang *(Ulsan Nat'l Institute of Science and Technology)*

Prospects for Blockchain Technology in International Security/Safeguards–Panel
Sponsored by NNPD. Session Organizer: Luc G. G. Van Den Durpel *(Nuclear-21)*
Chair: Luc G. G. Van Den Durpel *(Nuclear-21)*, Kelsey Amundson *(ANS Young Members Group Secretary)*

Distributed/Shared Ledger Technology *(D/SLT)*, more widely referred to as 'Blockchain', has gained a lot of visibility since the last few years, not at least, in the financial world. Being projected as potential game-changing the way various transactions can be handled in sectors such as banking, trade and supply chains, smart manufacturing and energy systems, the effective applicability in international security and safeguards remains topic for discussion.

Various organizations are evaluating the role D/SLT may represent for international safeguards indicating a spectrum of potential benefits to the safeguards system. Though, D/SLT might not be unique in providing such benefits as modern information technology may be even a more effective and trusted approach to cope with future international safeguards objectives.

This panel session aims to:
• Inform ANS-members on the principles of D/SLT and the applicability in international safeguards;
• Highlight the benefits and possible challenges towards such application;
• Sketch the prospects and next steps for such innovative technologies to further the effectiveness and transparency of safeguards;
• Inform on various activities worldwide on this domain.

Panelists:
TBA

Nuclear Science User Facilities and Fuels and Materials for Molten Salt Reactors

Sponsored by MSTD. Session Organizer: J. Rory Kennedy *(INL)*
Chair: J. Rory Kennedy *(INL)*, Kenneth J. Geelhood *(PNNL)*

The Effect of Coordination Numbers in Molten Salt Thermodynamic Models, Matthew S. Christian, Johnathon C. Ard, Theodore M. Besmann *(Univ. of South Carolina)*

Sound Propagation Characteristic of Phononic Crystals Pipeline with Periodic Vibration Isolation Mass, Qingna Zeng, Donghui Wang, Fenggang Zang, Yixiong Zhang, Xiaozhou Jiang *(Nuclear Power Institute of China)*

NSUF RAD-AFM: Nanoscale Material Property Measurements of Radioactive Materials, Shawn Riechers, Andy Casella, Dave Senor *(PNNL)*, Pradeep Ramuhalli *(ORNL)*

Building Your Leadership Competency

Sponsored by YMG. Session Organizer and Chair: Patrick Snouffer *(Bechtel National, Inc.)*
Chair: Timothy M. Crook *(MCR Performance Solutions)*

Leadership roles can take many forms and present a variety of challenges. Whether you are a mid-career professional or still in school, it is never too early to start taking on leadership roles and develop your leadership style. Leaders from across the industry will share their experiences on how they reached higher leadership positions and approaches when presented with a difficult situation. Learn about strategies to obtain your first leadership role, how to progressively take on larger roles, differences in leadership styles and how to handle challenges your team could face.

Panelists:
John Kotek *(Nuclear Energy Institute)*
Rachel Slaybaugh *(University of California-Berkeley; ARPA-E)*
Oscar Prat *(Westinghouse)*
Amber Von Ruden *(NAYGN/Exelon)*
Jhansi Kandasamy *(WIN/GE)*

Transformational Challenge Reactor

Sponsored by RPD. Session Organizer and Chair: Benjamin R. Betzler *(ORNL)*; **Vice Chair:** Florent Heidet *(ANL)*

Design Downselection for the Transformational Challenge Reactor, B. R. Betzler, B. J. Ade, A. J. Wysocki, P. C. Chesser, M. S. Greenwood, P. L. Wang, N. D. See, X. Hu, K. A. Terrani *(ORNL)*

Power Level Downselection for the Transformational Challenge Reactor, B. R. Betzler, B. J. Ade, A. J. Wysocki, P. K. Jain, M. S. Greenwood, J. D. Rader, J. J. W. Heineman *(ORNL)*, R. F. Kile, N. R. Brown *(Univ. of Tenn., Knoxville)*, K. A. Terrani *(ORNL)*

Control Element Design for the Transformational Challenge Reactor (TCR), J. R. Burns, B. R. Betzler, B. Ade *(ORNL)*, F. Heidet, A. Bergeron *(ANL)*

Transformational Challenge Reactor Moderator Material Selection to Achieve Fuel Minimization, A. Bergeron, P. Vegendla, S. Mohanty, F. Heidet *(ANL)*, B. J. Ade, B. R. Betzler *(ORNL)*

Thermal Neutron Scattering Measurements of YH_x for the Transformational Challenge Reactor, Christ W. Chapman, Xunxiang Hu, Jesse Brown, Goran Arbanas, Alexander I. Kolesnikov, Yongqiang Cheng, Luke Daemen *(ORNL)*

TUESDAY, JUNE 9
TECHNICAL SESSIONS - 12:00 PM (EDT)

Nuclear Installations Safety: General—II
Sponsored by NISD. Session Organizer: Zachary Jankovsky *(SNL)*
Chair: Andrew Clark *(Sandia)*, Zach Jankovsky *(SNL)*

Nonlinear Dynamic Explicit Analysis for 2-over-1 Interaction, N. D. Catella, C. H. Roy *(SGH)*

Nuclear Power Plant Evacuation: Gaps, Strategies, and Activity Scheduling, Adam Stein, Paul Fischbeck *(Carnegie Mellon Univ.)*, Sola Talabi *(Pittsburgh Technical LLC)*, Cristian Marciulescu *(EPRI)*

Considerations for Environmental Impact Assessment for Small Modular Reactors, G. Martinez-Guridi *(IAEA)*, M. Phaneuf *(Canadian Nuclear Safety Commission)*, M. H. Subki, M. Hussain, F. Reitsma *(IAEA)*

Communicating Safety & Risk to the Public–Panel
Sponsored by YMG. Session Organizers: Timothy M. Crook *(MCR Performance Solutions)*
Chairs: Alisha Kasam-Griffith *(ANL)*

Experts across many disciplines face challenges in communicating with the public about issues of safety and risk. Particularly in the arena of nuclear technologies, technical complexity and widespread misinformation can increase the barriers to effective communication. This panel discussion will focus on strategies for facilitating clear, informative, and honest conversations with non-experts about safety and risk in nuclear, and about the role of nuclear technologies in our communities.

Panelists:
Matt Bucknor *(Argonne National Laboratory)*
Monica Trauzzi *(NEI)*
Katie Mummah *(University of Wisconsin)*
Representative from Mothers for Nuclear
Representative from EPRI

Isotopes and Radiation: General
Sponsored by IRD. Session Organizer: Igor Jovanovic *(Univ. Michigan)*
Chair: Kenan Unlu *(PSU)*

Betavoltaic Nuclear Microbattery Based on Graphene/Si Schottky Junction, Xiaoyu Wang *(Univ. of Science and Technology of China)*, Weiping Liu *(Chinese Academy of Sciences)*, Jiachen Zhang *(Univ. of Science and Technology of China)*, Yuncheng Han, Taosheng Li, Chunjing Li *(Chinese Academy of Sciences)*

Correlation of Absolute 238U Bioavailability (^{238}U-ABA) and ^{238}U Bioaccessibility Fraction, Nur Shahidah Abdul Rashid *(Pohang Univ. of Science and Technology)*, Nur Syamimi Diyana Rodzi, Khoo Kok Siong *(The Nat'l Univ. of Malaysia)*, Wooyong Um *(Pohang Univ. of Science and Technology)*

Neutronics Analysis for Designing a Low Activation Heated Test Cell, Michael Buratynski, William J. Walters *(Penn State Univ.)*

Predicting Background Count Rate of a Mobile Detector using an Optimal Linear Ensemble of Learning Kernel Machines, Miltiadis Alamaniotis *(Univ. of Texas, San Antonio)*

TUESDAY, JUNE 9
TECHNICAL SESSIONS - 12:00 PM (EDT)

Computational Thermal Hydraulics—I
Sponsored by THD. Session Organizer: Xiaodong Sun *(Univ. Michigan)*
Chair: Elia Merzari *(ANL)*

Gas Dispersion Analysis for Glovebox Accident in a Ventilated Process Room, Si Y. Lee, Richard A. Patterson *(Savannah River Nuclear Solutions)*

Modelling Loss of Flow Transients in Gallium Thermal-hydraulic Facility Using Systems Code SAS4A/SASSYS-1 and Using CFD, Sundar Namala, Rizwan-uddin *(Univ. of Illinois, Urbana-Champaign)*, Tyler Sumner *(ANL)*

CFD Modeling of NBSR Thermal Shield, Manikanta Grandhi, Xue Yang *(Texas A&M Univ., Kingsville)*

Probing Interfacial Momentum Closures in Two-phase Bubbly Flow with Machine Learning-aided Methods, Han Bao *(INL)*, Jinyong Feng *(MIT)*, Hongbin Zhang *(INL)*, Nam Dinh *(NC State Univ.)*

Radiation Protection and Shielding: General
Sponsored by RPSD. Session Organizer: Irina I. Popova *(ORNL)*
Chair: Steven Nathan, Irina Popova *(ORNL)*

Shielding Analyses for the VENUS Instrument Enclosure, I. I. Popova, F. X. Gallmeier *(ORNL)*

Assessment of Electrostatic Radiation Shielding Efficacy via Void Area Calculation
Luke Stegeman, Rajarshi Pal Chowdhury *(Kansas State Univ.)*, Matthew L. Lund *(Univ. of Utah)*, Dan J. Fry *(NASA Lyndon B. Johnson Space Center)*, Stojan M. Madzunkov *(Jet Propulsion Laboratory)*, Amir A. Bahadori *(Kansas State Univ.)*

Dose Analysis for a Neutron Source Driven Subcritical Assembly, Cliff H. Ghiglieri, Jeffrey C. King *(Colorado School of Mines)*

The US EPA Superfund Radon Vapor Intrusion Screening Level *(RVISL)* Electronic Calculator, Stuart Walker *(US EPA)*

In-Pile Testing of Nuclear Fuels and Materials
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Heng Ban *(Pitt)*; **Vice Chair:** Kenneth J. Geelhood *(PNNL)*

Preliminary Results from In-Pile Transient Boiling Experiments at the TREAT Facility, C. Jensen, C. Folsom, N. Woolstenhulme, A. Fleming, R. Armstrong, D. Wachs *(INL)*, R. Hernandez, N. Brown *(Univ. of Tenn., Knoxville)*, K. Terrill, R. Christensen *(Univ. of Idaho)*

Informing Transient Testing of Fuel Designs for the Transformational Challenge Reactor, Robert Kile *(Univ. of Tenn., Knoxville)*, Daniel Schappel, Aaron J. Wysocki, Gokul Vasudevamurthy, Kurt A. Terrani *(ORNL)*, Nicholas R. Brown *(Univ. of Tenn., Knoxville)*

Strontium Diffusivity in IG-110 Graphite Using a Time-Release Method, Taylor Mae Weilert, Kyle L. Walton, John D. Brockman , Sudarshan K. Loyalka *(Univ. of Missouri)*

HFIR Irradiation Testing Supporting the Transformational Challenge Reactor, A. G. Le Coq, K. D. Linton, P. Champlin, R. H. Howard, X. Hu, T. S. Byun, K. A. Terrani *(ORNL)*

Establishing Maximal Core Excess Reactivity Envelope for TREAT Test Vehicle Insertion, John D. Bess, Nicolas E. Woolstenhulme, James R. Parry *(INL)*

Transport Methods
Sponsored by MCD. Session Organizer: Steven P. Hamilton *(ORNL)*
Chair: David Griesheimer *(Naval Nuclear Laboratory)*

Implicit Methods with Reduced Memory for Time-Dependent Boltzmann Transport Equation, Dmitriy Y. Anistratov *(NC State Univ.)*

Matrix Riccati Equation Method *(MREM)* of Solution of the Neutron Transfer Equation, B. Ganapol *(Univ. of Arizona)*, J. Patel *(The Ohio State Univ.)*

A Novel Analytical Nodal Method for Solution of the SN Transport Equation, Joshua Rocheleau, Dean Wang *(The Ohio State Univ.)*

Sharing of Good Industry Practices and/or Lessons Learned in Nuclear Criticality Safety–Panel
Sponsored by NCSD. Session Organizer: Deborah Ann Hill *(National Nuclear Lab)*
Chair: Deborah Ann Hill *(National Nuclear Lab)*, Ellen Saylor *(ORNL)*

Fundamental to the successful operation of any nuclear site is a first class safety culture which strives to continually improve in response to good industry practices and operating experience feedback. Speakers will provide examples of either specific good practices and/or lessons learned at their site, following which an audience discussion will be initiated on alternative good practices and experiences in these areas.

Panelists TBD

TECHNICAL SESSIONS - 2:30 PM (EDT)

Cyber Security for Nuclear Power Installations—I
Sponsored by HFICD; Cosponsored by NNPD. Session Organizer: Jamie Baalis Coble *(U.T., Knoxville)*
Chair: Shannon Eggers, Jamie Baalis Coble *(U.T., Knoxville)*

The Nuclear Digital I&C System Supply Chain Cyber-Attack Surface, Shannon L. Eggers *(INL)*

Development of a Framework for NPP Process-Aware Cyber Attack Detection and Diagnosis Methodology, Chanyoung Lee, Poong Hyun Seong *(KAIST)*

Advantages of a Game-Theoretic Approach for Nuclear Cybersecurity, Lee T. Maccarone, Daniel G. Cole *(Univ. of Pittsburgh)*

Cutting Edge Techniques in Education, Training and Distance Education
Sponsored by ETWDD. Session Organizer: Lisa M. Marshall *(NCSU)*
Chair: Drew Thomas, Lisa M. Marshall *(NCSU)*

Nuclear Engineering Online Course Exchange Program, Keith E. Holbert *(Arizona State Univ.)*, John Fletcher, Patrick A. Burr, Edward G. Obbard *(Univ. of New South Wales)*

Flawless Fusion in Less Than 60 Seconds Over Similar or Dissimilar Material
Paul Cheng *(Univ. of Alberta)*

Considerations for Bringing New Suppliers into the Nuclear Supply Chain
Elina Teplinsky, Anne Leidich *(Pillsbury Winthrop Shaw Pittman)*

TUESDAY, JUNE 9
TECHNICAL SESSIONS - 2:30 PM (EDT)

Thermal Hydraulics Activities for the Versatile Test Reactor
Sponsored by THD; Cosponsored by RPD. Session Organizer: Yassin A. Hassan *(Texas A&M)*
Chair: Xiaodong Sun *(University Mich.)*

Evaluation of Pressure Drop Correlations for the Wire-wrapped Rod Bundles, Su-Jong Yoon *(INL)*, Florent Heidet *(ANL)*

Sodium-Cooled Reactor Fuel Assembly Hydraulic Holddown, Earl E. Feldman *(ANL)*

Computational Methods for Radiation Protection and Shielding
Sponsored by THD; Cosponsored by RPD. Session Organizer: Michael Fensin *(LANL)*
Chair: Amir Bahadori *(KSU)*, Alexander Perry

Investigation into the Breakdown of Assumptions for 1D Radiation Transport in Air, L. M. Rolison, M. L. Fensin, K. C. Kelley, S. S. McCready *(LANL)*

First Steps in Scaling Adjoint Response to Areal Density for 1-D Neutron Transport in Air, M. L. Fensin *(LANL)*

International Platforms to Perform Atmospheric Dispersion Models for Dose Projection, Sanjoy Mukhopadhyay, Phillip Vilar Welter, Stephane Defour *(IAEA)*, Richard J. Maurer, Nate Hoteling *(Remote Sensing Laboratory - Joint Base Andrews)*

Advanced Manufacturing/Additive Manufacturing—I
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Troy Munro *(BYU)*, Kallie Metzger *(Westinghouse)*

Proton Radiation Effects on the Mechanical and Chemical Characteristics of 3D Printed ABS: Preliminary Results, Arielle J. Miller, Grant M. Warner, Dharmaraj Raghavan *(Howard Univ.)*

Room-Temperature Electrodeposition of Aluminum Coating from 1-Ethyl-3-Methylimidazolium Tetrachloroaluminate Based Ionic Liquid Bath, Junhua Jiang, Congjian Wang *(INL)*

Creep Resistance of Additively Manufactured 316 Stainless Steel, Meimei Li, Xuan Zhang, Wei-Ying Chen, Florent Heidet *(ANL)*, T. S. Byun, Kurt A. Terrani *(ORNL)*

Testing and Evaluation of Additively Manufactured TCR Core Materials, T. S. Byun, M. N. Gussev, B. E. Garrison, J. Simpson *(ORNL)*, M. Li, X. Zhang *(ANL)*, K. A. Terrani *(ORNL)*

Technical Sessions: Tuesday June 9

Monte Carlo and Multiphysics
Sponsored by MCD. Session Organizer: Steven P. Hamilton *(ORNL)*
Chair: Mathew Cleveland *(LANL)*, Patrick Shriwise *(ANL)*

Improving Convergence via Removal of Scattering Ratio Threshold in Discrete Diffusion Monte Carlo, Alexis Maldonado, Mathew A. Cleveland, Kelly G. Thompson *(LANL)*

Analysis of Mixed Cell Treatments for Multimaterial Nonlinear Radiation Diffusion, Pedram Ghassemi, Samuel P. Schofield *(LLNL)*

MPCORE Code for OPR-1000 Transient Multiphysics Simulation with Adaptive Step Size Control, Alexey Cherezov, Hanjoo Kim, Jinsu Park, Deokjung Lee *(Ulsan Nat'l Institute of Science and Technology)*

Reactor Analysis Methods—I
Sponsored by RPD. Session Organizer: Pavel V. Tsvetkov *(Texas A&M)*
Chairs: Pavel Tsvetkov *(Texas A&M)*, Massimiliano Fratoni *(Berkeley)*

Advances in MCNP for Reactor Calculations, R. B. Wilkerson, G. W. McKinney, C. J. Josey, M. E. Blood, J. D. Galloway, J. C. Armstrong, H. R. Trellue *(LANL)*

Single Channel Design Based on Artificial Intelligence for Molten Salt Reactors, Mehmet Turkmen, Kathryn D. Huff *(Univ. of Illinois)*

Development of FRENDY Nuclear Data Processing Code: Generation Capability of Multi-group Cross Sections from ACE File, Akio Yamamoto, Tomohiro Endo *(Nagoya Univ.)*, Kenichi Tada *(Japan Atomic Energy Agency)*

Resume/CV Workshop
Sponsored by YMG. Session Organizer: Timothy M. Crook *(MCR Performance Solutions)*
Chair: Catherine Prat *(Westinghouse)*

This workshop will address how to build a successful resume or CV in industry, national labs, academia, and government/policy. In the first half of this workshop, panelists representing each sector will go through what makes for a strong application in their sector, and critique different examples as a group. Following this, attendees will split into groups based on their sectors of interest and workshop their own resumes/CVs with a panelist and each other. Audience members are recommended to bring their own resume/CV.

Panelists:
Jamie Coble *(University of Tennessee – Knoxville)*
John Kotek *(Nuclear Energy Institute)*
Brad Williams *(ANS Congressional Fellow)*
Piyush Sabharwall *(Idaho National Lab)*

Uranium Mine Remediation–Panel
Sponsored by DESD. Session Organizer: James J. Byrne *(Byrne & Associates)*
Chair: James J. Byrne *(Byrne & Associates)*; **Vice Chair:** Gerald van Noordennen *(EnergySolutions)*

The Uranium Mill Tailings Remedial Action (UMTRA) Project was created by the United States Department of Energy (DOE) to monitor the cleanup of uranium mill tailings. In 1978 the US Congress passed the Uranium Mill Tailings Radiation Control Act (UMTRCA) which tasked the DOE with the responsibility of stabilizing, disposing, and controlling uranium mill tailings and other contaminated material at uranium mill processing spread across 10 states and at approximately 5,200 associated properties. This session will explore the progress of this effort and explore lessons learned that could be applied to other legacy sites.

Panelists:
Stuart Walker *(U.S. EPA)*
Jodi Waugh *(U.S. DOE)*
Dariel Yazzie *(Navajo Nation Environmental Protection Agency)*

TECHNICAL SESSIONS - 4:35 PM (EDT)

Cyber Security for Nuclear Power Installations—II
Sponsored by HFICD; Cosponsored by NNPD. Session Organizer: Jamie Baalis Coble *(U.T., Knoxville)*
Chairs: Shannon Eggers, Jamie Baalis Coble *(U.T., Knoxville)*

Nuclear Instrumentation and Control Simulation (NICSim) Platform for Investigating Cybersecurity Risks, Mohamed S. El-Genk, Timothy M. Schriener *(Univ. of New Mexico)*

Programmable Logic Controller of a Pressurized Water Reactor Core Protection Calculator, Andrew Hahn, Mohamed S. El-Genk, Timothy M. Schriener *(Univ. of New Mexico)*

Pressurizer Model and PLCs for Investigation of Cybersecurity of PWR Plants, Ragai M. Altamimi, Mohamed S. El-Genk, Timothy M. Schriener *(Univ. of New Mexico)*

Steam Generator Model and Controller for Cybersecurity Analyses of Digital I&C Systems in PWR Plants, Timothy M. Schriener, Mohamed S. El-Genk *(Univ. of New Mexico)*

Pitch Your Job–Panel
Sponsored by YMG. Session Organizer: Timothy M. Crook *(MCR Performance Solutions)*
Chairs: Catherine Prat *(Westinghouse)*, Alyse Huffman *(Professional Staff, US House Science Committee)*

This session will showcase various careers that ANS young members have in the nuclear field. Young members will have 3 minutes to present their career and captivate an audience of peers who will vote for the best pitches. Modeled after the Young Members Group very popular "Pitch Your PhD" competition, the early- and mid-career professionals presenting here will win awards to be announced during the conference in the form of bragging rights. In addition, the winners may have their pitch published in ANS News!

TUESDAY, JUNE 9
TECHNICAL SESSIONS - 4:35 PM (EDT)

Focus on Communications–Panel
Sponsored by ETWDD; Cosponsored by YMG. Session Organizer and Chair: Mimi H. Limbach *(Potomac Communications)*

The coronavirus *(COVID-19)* has upended the way organizations and individuals interact and communicate. As we practice social distancing and comply with "stay at home" orders, nuclear energy communicators have found ways to continue to tell the story of nuclear energy. This panel will feature insights and information from communications leaders who each have prevailed over the challenges that the coronavirus era presents for communicating with internal and external stakeholders.

Speakers:
Rae Moss *(Communications Director, Idaho National Laboratory)*
Craig Piercy *(Executive Director, American Nuclear Society)*
Tricia Weagant *(Vice President, Canadian Nuclear Society)*

Waste Disposal Solutions in a Country with No HLW Repository–Panel
Sponsored by FCWMD. Session Organizers and Chairs: Sven Bader *(Orano)*, Steven Nesbit *(Consultant)*

Panelists TBD

From CAD to Transport for Radiation Protection and Shielding Calculations
Sponsored by RPSD. Session Organizer: Michael Lorne Fensin *(LANL)*
Chair: Chelsea D'Angelo *(LANL)*, Igor Remec *(ORNL)*

McCAD v1.OL An Improved CAD to MCNP Interface Library, M. Harb, C. Wegmann, U. Fischer *(Karlsruhe Institute for Technology)*

McCad Plugin Developments for the SpaceClaim Software, Yuefeng Qiu, Ulrich Fischer *(Karlsruhe Institute of Technology)*

Validation of Radiation Transport Methods for Ball Grid Array Inspection Systems, Michael P. Pfeifer, Nathanael Simerl, Ryan J. Strahler, Jack T. Casburn, Miranda L. Dodson *(Kansas State Univ.)*, John Porter *(Honeywell FMT, LLC)*, Walter J. McNeil, Amir A. Bahadori *(Kansas State Univ.)*

From CAD to Nuclear Data S/U for Shielding Applications, Bor Kos, Robert E. Grove *(ORNL)*, Ivan A. Kodeli *(Jozef Stefan Institute)*

Radiation Transport with Moving Geometries and Sources Using DAGMC, Chelsea A. D'Angelo, Paul P. H. Wilson *(Univ. of Wisconsin, Madison)*

Experience with Automatic CAD to MCNP Model Conversion at ORNL's SNS, Igor Remec, Wei Lu *(ORNL)*

Advanced Manufacturing/Additive Manufacturing—II
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Kallie Metzger *(Westinghouse)*, Kenneth J. Geelhood *(PNNL)*

In Situ Mechanical Testing of AM 316L Steel-TCR Core Material, M. N. Gussev, T. S. Byun, R. R. Dehoff, K. A. Terrani *(ORNL)*

Evaluation of Heat Treatments for Additively Manufactured 316L, J. Simpson, R. Dehoff, T. S. Byun, K. A. Terrani *(ORNL)*

Modeling Time-Dependent Surrogates of Additive-Manufactured Nuclear Fuels Processes, Congjian Wang, Wen Jiang, Yipeng Gao *(INL)*

In-situ High-energy X-ray Study of Deformation Mechanisms in Additively Manufactured 316 Stainless Steel, Xuan Zhang, Meimei Li, Jun-Sang Park, Peter Kenesei, Jonathan Almer *(ANL)*

Radiation Transport Software
Sponsored by MCD. Session Organizer: Steven P. Hamilton *(ORNL)*
Chair: Dmitriy Anistratov *(NC State University)*, Katherine Royston *(ORNL)*

DAG-OpenMC: CAD-Based Geometry in OpenMC, Patrick C. Shriwise *(ANL)*, Xiaokang Zhang *(Chinese Academy of Sciences)*, Andrew Davis *(UK Atomic Energy Agency)*

Extending MPACT to 2D Hexagonal Geometry, Kevin J. Connolly, Aaron M. Graham *(ORNL)*

Application of MATLAB PDE Toolbox for the IAEA-3D PWR Benchmark, Abiodun Ajirotutu, Xue Yang *(Texas A&M Univ., Kingsville)*

Reactor Physics of Micro Reactors for Terrestrial and Space Applications—I
Sponsored by RPD; Cosponsored by ANSTD, OPD. Session Organizer: Pavel V. Tsvetkov *(Texas A&M)*
Chair: Kristin Smith, Pavel V. Tsvetkov *(Texas A&M)*

Neutronics Analysis of Cold Critical KRUSTY Experiments using MCNP and Serpent, Kristin Smith *(Texas A&M Univ.)*, Jesson Hutchinson, Theresa Cutler, Rene Sanchez *(LANL)*, Pavel Tsvetkov *(Texas A&M Univ.)*

Preliminary Study of Model Predictive Control for Load Follow Operation of Holos Reactor, Sooyoung Choi *(Univ. of Michigan)*, Shai Kinast *(Univ. of Michigan/Nuclear Research Center Negev)*, Volkan Seker *(Univ. of Michigan)*, Claudio Filippone *(HolosGen LLC)*, Brendan Kochunas *(Univ. of Michigan)*

Linear Stability Analysis of HTR-like Micro-reactors, Doron Sivan *(Ben-Gurion Univ. of the Negev/ Israel Atomic Energy Commission)*, Shai Kinast *(Nuclear Research Center Negev/Univ. of Michigan)*, Sooyoung Choi, Volkan Seker *(Univ. of Michigan)*, Erez Gilad *(Ben-Gurion Univ. of the Negev)*, Claudio Filippone *(HolosGen LLC)*, Brendan Kochunas *(Univ. of Michigan)*

WEDNESDAY, JUNE 10
TECHNICAL SESSIONS - 12:00 PM (EDT)

General Topics in Instrumentation and Controls and Human Factors
Sponsored by HFICD. Session Organizer: Jamie Baalis Coble *(U.T., Knoxville)*
Chair: Hyun Gook Kang *(RPI)*, Jamie Baalis Coble *(U.T., Knoxville)*

Control and Load Balancing with an IPWR Module to Support Deep Renewables Penetration, Richard Bisson, Jamie Coble *(Univ. of Tenn., Knoxville)*

Load Following Characteristics of Multi-Modular Reactors, Areai Nuerlan, Rizwan-uddin *(Univ. of Ill., Urbana-Champaign)*, Fuyu Zhao *(Xi'an Jiaotong Univ.)*

General Topics in Decommissioning
Sponsored by DESD. Session Organizer: James J. Byrne *(Byrne and Associates)*
Chair: James J. Byrne *(Byrne and Associates)*, Gerald van Noordennen *(EnergySolutions)*

Mercury Remediation Process Optimization for Clayey Soil, Michael Smith *(UNC)*, Sven Bader *(Orano)*, Thomas Koch *(UNC)*, Arthur Niemoller *(Orano)*

Hydrogen Economy in Champaign-Urbana, IL, Roberto E. Fairhurst Agosta, Samuel G. Dotson, Kathryn D. Huff *(UIUC)*

Energy Storage Systems and Integration with NPPs—I
Sponsored by OPD. Session Organizer: William Neal Mann *(Univ. Texas, Austin)*
Chair: N. Dianne Ezell *(ORNL)*, William Neal Mann *(Univ. Texas, Austin)*

Multi-Gigawatt-Day Low-Cost Crushed-Rock Heat Storage Coupled to Nuclear Reactors for Variable Electricity and Heat, Charles Forsberg *(MIT)*

Next-Generation Energy Storage Systems for SBO/ELAP Events, Rahul Jay *(The City College of New York)*, Sanjoy Banerjee, Robert J. Messinger *(The City College of New York/CUNY Energy Institute)*

Engineering a Voltage Buffer to Improve Offsite Power Reliability Independent of Telemetry or Operator Action, Stephen H. Shepherd *(Shepherd Hydricity, Inc.)*

Chemical Treatment of Radioactive Waste
Sponsored by FCWMD. Session Organizer: Patricia D. Paviet *(PNNL)*
Chair: Jef Lucchini *(LANL)*, Stephanie Bruffey *(ORNL)*

Examples of Technology Applicable to In-Situ Waste Characterization, J. F. Lucchini, D. M. Brigham, B. A. Crawford *(LANL)*

Digestion of Zircaloy Cladding for UNF using Sulfur Chloride Reagents, Craig Barnes, Breanna Vestal *(Univ. of Tenn., Knoxville)*, Guillermo (Bill) Daniel DelCul *(ORNL)*

Photodecomposition of Organoiodides to Molecular Iodine as Pretreatment for Adsorption, John Stanford, Tejaswini Vaidya, Vivek Utgikar, Krishnan Raja *(Univ. of Idaho)*, Piyush Sabharwall *(INL)*

Removal of Sr^{2+} in Aqueous Solution Using MOF-1@MnO_2 Composites, Sang-June Choi, Jung-Weon Choi *(Kyungpook Nat'l Univ.)*

Fenton-Like Process for Treatment of IRN-150 Resin with Simulated ^{14}C, Junsung Jeon, M. Aamir Hafeez, Wooyong Um *(Pohang Univ. of Science and Technology)*

Sensors and In-Pile Instrumentation
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Colby Jensen *(INL)*, Kallie Metzger *(Westinghouse)*

Optical Transmission of a-SiO_2 and α-Al_2O_3 Following High-Dose Neutron Irradiation, Christian M. Petrie *(ORNL)*, A. Birri, T. E. Blue *(The Ohio State Univ.)*

High Temperature Silicon-Carbide Furnace for Near Core Irradiation Experiments, Matthew P. Van Zile, Joel Hatch, Andrew Kauffman, Lei R. Cao *(The Ohio State Univ.)*

Designing an Impedance-based Technique for Studying Corrosion on Cladding Materials, Ling Ding, Hongqiang Hu *(INL)*, Michael Reynolds, Michael F. Hurley, Claire Xiong *(Boise State Univ.)*

Compensation Scheme for Radiation-Induced Attenuation in Optical Fibers Interrogated Using Low-Coherence Interferometry, Daniel C. Sweeney, Adrian M. Schrell, Christian M. Petrie *(ORNL)*

In-Pile Loss of Coolant Accident Testing at TREAT, N. Woolstenhulme, C. Jensen, C. Folsom, R. Armstrong, D. Kamerman, D. Wachs *(INL)*

Challenges and Opportunities in Thermal Hydraulics of High Temperature Gas Cooled Reactors–Panel
Sponsored by THD. Session Organizer: Brian G. Woods *(Oregon State)*
Chair: W. David Pointer *(ORNL)*, Brian G. Woods *(Oregon State)*

Advanced high temperature gas cooled reactors typically rely on high pressure gas flows for heat removal during normal operations and a mix of natural convection, radiation and conduction for heat removal under postulated accident conditions. The combination of high heat capacity structures, relatively low power density, high Prandtl number low-density coolant, and multiple heat removal mechanisms offers significant advantages in terms of passive safety. However, this combination also requires the careful development, verification, and validation of experimental facilities, models and analysis tools that must accurately describe a wide range of flow conditions and heat transfer phenomena. This session provides an opportunity to review current efforts in modeling, simulation or experiments and identify current challenges and opportunities associated with the thermal hydraulics of these systems.

Panelists TBD

Meeting the Challenges in Non-LWR PRA Standard Development–Panel
Sponsored by NISD. Session Organizer: Matthew R. Denman *(Kairos Power)*
Chair: Matt Denman *(Kairos Power)*, Askin Guler Yigitoglu

The licensing modernization process (LMP) provides a risk-informed framework to enable the efficient licensing of non-light water reactors. This panel will provide insights from the LMP authors, reactor designers, and the nuclear regulatory commission regarding how well the LMP is working and the future landscape of reactor licensing.

Panelists:
Dave Grabaskas *(ANL)*
Jordan Hagaman *(Kairos)*
Matthew Denman *(Kairos)*
Karl Fleming *(KNF Consulting Services)*
Robert Budnitz *(LBNL)*

Acceleration Methods
Sponsored by MCD. Session Organizer: Steven P. Hamilton *(ORNL)*
Chair: Steven P. Hamilton *(ORNL)*, Madicken Munk *(Univ of Illinois UC)*

Assessing the Effectiveness of Acceleration Methods for Deterministic Neutron Transport Solvers
J. S. Rehak, R. N. Slaybaugh *(Univ. of California, Berkeley)*

Stability Analysis of CMFD Acceleration and Linear Prolongation for Weighted Linear Difference Schemes, Rodolfo M. Ferrer *(Studsvik Scandpower)*

A Hybrid Neutronics Method with Diffusion Synthetic Acceleration for k-eigenvalue Problem, Jiahao Chen, Jason Hou *(NC State Univ.)*

Hybrid Parallel Computing of Solving 3D Multi-group Neutron Diffusion Equation via Multi-level CMFD Acceleration, Shunjiang Tao, Yunlin Xu *(Purdue Univ.)*

Reactor Physics of Advanced Reactors
Sponsored by RPD. Session Organizer: Pavel V. Tsvetkov *(Texas A&M)*
Chair: Pavel V. Tsvetkov *(Texas A&M)*, Massimiliano Fratoni *(Berkeley)*

A Gas-Cooled Water Moderated Thermo-Electric Reactor Concept, Anatoly Blanovsky *(Westside Environmental Technology)*

Modelling of the HTR-PM Pebble-bed Reactor using OpenMC, Jiankai Yu *(MIT)*, Qiudong Wang, Ding She *(Tsinghua Univ.)*, Benoit Forget *(MIT)*

Multi-physics Coupling of PROTEUS-NODAL and SAM for MSR Simulation under MOOSE Framework, Gang Yang, Mustafa K. Jaradat, Hansol Park, Won Sik Yang *(Univ. of Michigan)*, Changho Lee *(ANL)*

The Application of Disk-type Burnable Absorber in the Soluble-Boron-Free ATOM Core, Xuan Ha Nguyen, Seongdong Jang, Yonghee Kim *(KAIST)*

Balancing Competition and National Needs in the Medical Isotopes Market–Panel
Sponsored by NCSD. Session Organizer: Joseph A. Christensen *(SHINE Medical Technologies)*
Chair: Katherin Goluoglu *(C.S. Engineering, Inc.)*, Brendon Little

This session addresses the growing field of medical isotope production and the implications for criticality safety. The field involves a number of emerging techniques and technologies which produce criticality safety challenges, INCLUDING handling high-assay low-enriched uranium in known or new chemical compositions. These challenges create opportunities for advancements in criticality safety techniques and demonstrate a continuing need for nuclear data. This panel is designed to highlight challenges, advancements, and current or future needs in the field of criticality safety for medical isotope production facilities.

Panelists TBD

Technical Sessions: Wednesday June 10

Online Monitoring and Prognostics
Sponsored by HFICD. Session Organizer: Jamie Baalis Coble *(U.T., Knoxville)*
Chair: Pradeep Ramuhalli *(ORNL)*, Jamie Baalis Coble *(U.T., Knoxville)*

Using Auxiliary Particle Filter to Estimate Remaining Useful Life, Hang Xiao, Jamie B. Coble, J. Wesley Hines *(Univ. of Tenn.)*

Progress Toward Molten Salt Reactor Heat Exchanger On-Line Monitoring, S. W. Glass, M.S. Good, E.L. Forsi, R. O. Montgomery *(PNNL)*

Energy Storage Systems and Integration with NPPs—II
Sponsored by OPD. Session Organizer: William Neal Mann *(U.T., Austin)*
Chair: William Neal Mann *(U.T., Austin)*, N. Dianne Ezell *(ORNL)*

Base-Load Light-Water Reactors with Variable Electricity Using Crushed-Rock Heat Storage and Steam Peaking Plant with High-Efficiency Steam Injectors, C. Forsberg *(MIT)*, T. Narabayashi *(Tokyo Institute of Technology)*

System Efficiency and Dynamic Study of $Ca(OH)_2$/CaO Chemical Heat Pump, Aman Gupta *(Univ. of Idaho)*, Paul D. Armatis *(Oregon State Univ.)*, Piyush Sabharwall *(INL)*, Vivek Utgikar *(Univ. of Idaho)*, Brian M. Fronk *(Oregon State Univ.)*

Separating Nuclear Reactors from the Power Block with Heat Storage: A New Power Plant Design Option: Workshop Summary, Charles Forsberg *(MIT)*, Piyush Sabharwall *(INL)*, Andrew Sowder *(EPRI)*

Thermal Hydraulics of Nuclear Micro-Reactors and MSR
Sponsored by THD. Session Organizer: Caleb S. Brooks *(Univ. Illinois)*
Chair: Subhash Sharma *(UML)*

Microreactor Safety Analysis: Requirements, Considerations and Potential Impact, Rohan Biwalkar, Sola Talabi *(Pittsburgh Technical LLC)*, Kenneth Redus *(Redus and Associates LLC)*

Assessment of the Thermal-Structural Characteristics of Core Components in a Preconceptual Design of the Transformational Challenge Reactor, Casey J. Jesse, James W. Sterbentz *(INL)*, Benjamin R. Betzler *(ORNL)*

Design of a Flat Channel Experiment to Study Molten Salt Thermal Radiation Heat Transfer, P. Rubiolo, J. Giraud, V. Ghetta, M. Tano, J. Blanco, F. Kovacevich *(LPSC, Université Grenoble-Alpes)*

Managing Hydrogen Systems in Nuclear Facilities: Lessons Learned from the DOE Complex and Industry–Panel
Sponsored by NISD. Session Organizer: Kevin R. O'Kula *(Amentum Technical Services)*
Chair: Kevin O'Kula *(Amentum Technical Services)*, Richard Langdon *(Bechtel)*

In 2019, the U.S. Department of Energy (DOE) announced three first-of-a-kind projects designed to improve the long-term economic competitiveness of the nuclear power industry. Three commercial electric utilities and Idaho National Laboratory were chosen to adapt existing nuclear power plants to demonstrate hydrogen production. While the successful demonstration of the technology has significate beneficial implications for primary energy, transport and storage sectors in the U.S., there are safety issues that must be addressed. This panel will discuss past and contemporary DOE and industry experience and the insights gained regarding hydrogen in nuclear and non-nuclear facilities, and supporting systems/structures/components. The panel member composition is designed represent a wide spectrum of experience and expertise in understanding and addressing the technical issues, and managing safety challenges posed by hydrogen.

Panelists:
Nick Barilo *(Center for Hydrogen Safety, Pacific Northwest National Laboratory)*
Dr. David H. Cook *(High Flux Isotope Reactor, Oak Ridge National Laboratory)*
Dr. Joseph E. Shepherd *(Caltech)*
Additional panelists to be named

WEDNESDAY, JUNE 10
TECHNICAL SESSIONS - 2:30 PM (EDT)

Accelerated Materials Discovery
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: J. Rory Kennedy *(INL)*, Kenneth J. Geelhood *(PNNL)*

Computational Analysis of Rhenium (I) Complex, Allison McKee, Meheret Tadesse *(Univ. of Houston-Downtown)*

Development of Yttrium Hydride Moderator for the Transformational Challenge Reactor, Xunxiang Hu, Chinthaka Silva, Kurt A. Terrani *(ORNL)*

Rapidly Screening Materials for Void Swelling Resistance with Indirect Photoacoustic Measurements, Nouf Almousa *(Princess Nourah Bint Abdulrahman Univ.)*, Benjamin Dacus, Kevin B. Woller *(MIT)*, Changheui Jang *(KAIST)*, Michael P. Short *(MIT)*

Aging of Materials
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Kallie Metzger *(Westinghouse)*, Kenneth J. Geelhood *(PNNL)*

A Computational Investigation of the Diffusive Pathways for Interstitial Helium in bcc W and bcc Mo Adib J. Samin *(Air Force Institute of Technology)*

Development of Cable Aging Acceptance Criteria for Nuclear Facilities, Patrick Ellis, Gary Harmon, Patrick Ward, Codi Ferree *(AMS)*

Application of Condition Monitoring Technologies for Aging Electrical Cables, Bryan McConkey, Trevor Toll, Patrick Ellis, Elijah Connatser *(AMS)*

Reactor Analysis Methods—II
Sponsored by RPD. Session Organizer: Pavel V. Tsvetkov *(Texas A&M)*
Chair: Pavel V. Tsvetkov *(Texas A&M)*, Massimiliano Fratoni *(Berkeley)*

Analytic Treatment of Intra-Fuel-Rod Temperature Distributions in the GPU-Based Continuous Energy Monte Carlo Code PRAGMA, Namjae Choi, Han Gyu Joo *(Seoul Nat'l Univ.)*

Adjoint Driven Ex-Core Response Estimation in PWR with Thermal Feedback, Shane C. Henderson, Tara M. Pandya, Shane Stimpson *(ORNL)*

ANS-8 Standards Forum
Sponsored by NSCD. Session Organizer: Douglas G. Bowen *(ORNL)*
Chair: Douglas G. Bowen *(ORNL)*, Kevin Reynolds *(DOE)*

Subcommittee ANS-8, Operations with Fissile Material Outside Reactors, meets to discuss various technical and administrative aspects of the approximately 20 national consensus standards under its purview. In addition to status and progress updates by representatives of individual working groups, formal presentations on the technical bases of numerical values such as subcritical limits and experiences with applications of particular standards are solicited. Agenda topics such as new and expanded standards are also encouraged.

WEDNESDAY, JUNE 10
TECHNICAL SESSIONS - 2:30 PM (EDT)

Innovating Nuclear through an Entrepreneurial Student Prize Competition–Panel
Sponsored by YMG. Session Organizer: Timothy M. Crook *(MCR Performance Solutions)*
Chair: Harsh Desai *(Nuclear Energy Institute)*

Deploying nuclear power at scale worldwide is a critical component to deep decarbonization. The Nuclear Energy Grand Challenge was organized by the Energy Impact Center and University of Michigan. The first prize competition, Reimagining Nuclear Waste, took place in partnership with the University of Michigan. It was designed to advance the clean energy economy by engaging collegiate innovators and entrepreneurs to tackle one of the most unique challenges facing the nuclear energy industry - the perception of nuclear waste. This panel will describe the process and results.

Panelists:
Todd Allen *(University of Michigan)*
Michelle Brechtelsbauer *(Energy Impact Center)*
Jessica Lovering *(Carnegie Mellon University and Energy for Growth Hub)*
Sara Norman *(University of Michigan)*

TECHNICAL SESSIONS - 4:35 PM (EDT)

Digital Instrumentation and Control
Sponsored by HFICD. Session Organizer: Jamie Baalis Coble *(U.T., Knoxville)*
Chair: Richard Wood *(U.T., Knoxville)*, Ted Quinn *(Technology Resources)*

Automated Functional Testing for Nuclear Digital Instrumentation and Control Systems, Greg Morton, Brent Shumaker, Dan McCarter, Chris Maddux *(AMS)*

Study on the Test Approach and Development Method of APR1400 Training Simulator with Virtual DCS, Sung Kon Kang, Kyung Min Kim, Min Seok Kim *(Korea Hydro Nuclear Power Co.)*

Development of an NPP VDCS Verification Platform, XY Wei, JY Qing, PW Sun, Q Ma, HW Sun *(Xi'an Jiaotong Univ.)*

Operations and Power: General
Sponsored by OPD. Session Organizer: William Neal Mann *(Univ. Texas, Austin)*
Chair: William Neal Mann *(Univ. Texas, Austin)*, N. Dianne Ezell *(ORNL)*

Stochastic Analysis for Long Term Capital Structures, Systems, and Components Refurbishment and Replacement, Congjian Wang, Diego Mandelli *(INL)*, David Morton *(Northwestern Univ.)*, Ivilina Popova *(Texas State Univ.)*, Stephen Hess *(Jensen Hughes)*, Shawn St. Germain, Curtis Smith *(INL)*

Effective Nuclear Plant Waste Heat Utilization by a Bottoming Cryogenic Power Cycle, Alex Kravets, Don Grace *(Veritask Energy Systems, Inc.)*

IAEA Activities to Facilitate Near Term Deployment of SMRs, Frederik Reitsma, M. Hadid Subki, Gerardo Martinez-Guridi *(IAEA)*

Fuel Cycle and Waste Management: General
Sponsored by FCWMD. Session Organizer: Stephanie H. Bruffey *(ORNL)*
Chair: Stephanie H. Bruffey *(ORNL)*, Joy Leggett *(U.S. NRC)*

DANESS v9: Dynamic Analysis of Advanced Nuclear Energy Systems, Luc Van Den Durpel *(Nuclear-21)*

SNF Consumption and Disposal using the Mu*STAR Molten-Salt Accelerator-Driven Subcritical Reactor, Robert J. Abrams, Mary Anne Cummings, Rolland P. Johnson, J. D. Lobo, Thomas J. Roberts *(Muons, Inc.)*

WEDNESDAY, JUNE 10
TECHNICAL SESSIONS - 4:35 PM (EDT)

Computational Thermal Hydraulics—II
Sponsored by THD. Session Organizer: Elia Merzari *(Penn State)*
Chair: Prashant Jain *(ORNL)*

Validation of the 1-D Thermal Stratification Model in Gallium Environment, Cihang Lu, Zeyun Wu *(Virginia Commonwealth Univ.)*, Brendan Ward, Hitesh Bindra *(Kansas State Univ.)*

Cooling Channel Optimization in Additively Manufactured Gas-Cooled Reactor Core, Justin Weinmeister, Prashant K. Jain *(ORNL)*

Multi-Scale and Multi-Physics Analysis of PWR Steam Line Break Accident, Jae Ryong Lee, Ik Kyu Park, Han Young Yoon *(KAERI)*

Sodium Fire Models for In- and Ex-vessel Safety Analysis Code SPECTRA, Mitsuhiro Aoyagi, Akihiro Uchibori, Takashi Takata, Hiroyuki Ohshima *(Japan Atomic Energy Agency)*

Code Validation for SBLOCA Test of PHWR using MARS-KS, Kyunglok Baek, Seon Oh Yu *(Korea Institute of Nuclear Safety)*

Nuclear Fuels—I
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Colby Jensen *(INL)*, Kallie Metzger *(Westinghouse)*

Structural Materials Investigations for the Westinghouse Lead Fast Reactor, Michael R. Ickes, Luke Czerniak, Arash Parsi, Paolo Ferroni *(Westinghouse Electric Co.)*

The Impact of Model Parameters and Local Conditions on the Hydrogen Migration and Redistribution Model in Bison, Seokbin Seo, Edward M. Duchnowski, Nicholas R. Brown *(Univ. of Tenn., Knoxville)*

Sensitivity, Uncertainty, and Machine Learning
Sponsored by MCD. Session Organizer: Steven P. Hamilton *(ORNL)*
Chair: Brian Kiedrowski *(Univ. of Michigan)*, Travis Trahan *(LANL)*

Bayesian Parameter Estimation of Neutron Multiplicity Counting Equations, Philippe P. Humbert *(CEA)*

Constrained Sensitivity Analysis for Reactor Physics Problems, Jeongwon Seo, Hany Abdel-Khalik *(Purdue Univ.)*, Zoltan Perko *(Delft Univ. of Technology)*

WEDNESDAY, JUNE 10
TECHNICAL SESSIONS - 4:35 PM (EDT)

Reactor Physics of Micro Reactors for Terrestrial and Space Applications—II
Sponsored by RPD; Cosponsored by ANSTD, OPD. Session Organizer: Pavel V. Tsvetkov *(Texas A&M)*
Chair: Pavel V. Tsvetkov *(Texas A&M)*, Jeff King *(MINES)*

Depletion Analysis of a Micro-Reactor Annular Heat Pipe Fuel Element, Alec Golas, Stephanie Astudillo-Gomez, Subash Sharma *(Univ. of Massachusetts Lowell)*

MINI-SMR-21 in Once-through Long-lived Fuel Cycle Feasibility Assessment, Gray Chang, Julie Foster *(JFoster and Associates)*, Jim Harrell *(Zachry Nuclear)*

A Numerical Tool for Space Nuclear Reactor Design based on Molten Salt Reactors (MSRs), P. Rubiolo *(Université Grenoble-Alpes)*, M. Tano *(Texas A&M Univ.)*, J. Blanco, V. Ghetta, J. Giraud, V. Richard *(Université Grenoble-Alpes)*

Optimal Sizing of a Micro-Reactor for Embedded Grid Systems, Samuel G. Dotson, Kathryn D. Huff *(Univ. of Illinois, Urbana-Champaign)*

Advanced Nuclear Engineering to Support Space Exploration
Florent Heidet *(ANL)*, Yoichi Momozaki *(ANL)*

New Developments in Shipping Packages Related to Criticality Safety–Panel
Sponsored by NCSD. Session Organizer: Marvin H. Barnett *(SRNL)*
Chair: Douglas Bowen *(ORNL)*, Marvin H. Barnett *(SRNL)*

Over the last decade*(s)* there have been many new Type A and Type B shipping packages designs and new allowed fissile contents. Both ANSI/ANS Standards and the Code of Federal Regulations require an evaluation of criticality safety for each combination of shipping package configuration and content. The purpose of this session is to provide a discussion of the unique challenges and requirements for criticality safety during both transport and storage of shipping packages.

Panelists TBD

Technical
Sessions:
Wednesday
June
10

THURSDAY, JUNE 11
TECHNICAL SESSIONS - 10:00 AM (EDT)

Experimental Thermal Hydraulics—II
Sponsored by THD. Session Organizer: Igor A. Bolotnov *(NCSU)*
Chair: Jun Wang *(Univ. Wisc.)*, Su-Jong Yoon *(INL)*

Design and Verification Testing for Metallic Fuel Relocation Experiments with Pressure Injection in a Pin Bundle Core Structure of a Sodium-Cooled Fast Reactor, Taeil Kim, Dzmitry Harbaruk, Darius Lisowski, Nathan Bremer, Mitchell Farmer, Christopher Grandy, Yoon Il Chang *(ANL)*

Measurements of Pressure Drop in Pipes with Twisted Tape Inserts for Molten Salt Reactor Applications, Cody S. Wiggins, Arturo A. Cabral, Meryem E. Murphy, Candler L. L. Langston, Lane B. Carasik *(Virginia Commonwealth Univ.)*

ANS Position Statement on the Use of Low Enriched Uranium in Space–Panel
Sponsored by ANSTD. Session Organizer: Jeffrey C. King *(CSM)*
Chair: Jeffrey C. King *(CSM)*, John Bess *(INL)*

More information to come.

Nuclear Fuels—II
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Kenneth J. Geelhood *(PNNL)*, Kallie Metzger *(Westinghouse)*

Performance Analysis of Silicon Carbide Composite Clad Uranium Carbide Fuel during Reactivity Initiated Accident, Hangbok Choi, John Bolin *(General Atomics)*

Microstructural Analysis of the SiC Layer of Tristructural-Isotropic Particles in High-Temperature Steam Atmospheres, Katherine Montoya, Brian A. Brigham *(Univ. of Texas, San Antonio)*, Tyler J. Gerczak *(ORNL)*, Elizabeth Sooby Wood *(Univ. of Texas, San Antonio)*

Using Machine Learning to Predict the Oxidation of Graphite, Cole Moczygemba, Michael Geyer, Amanda Fernandez, Elizabeth Sooby Wood *(Univ. of Texas, San Antonio)*

Robotics and Remote Systems: General
Sponsored by RRSD. Session Organizer: Leonel E. Lagos *(Florida International University)*
Chair: Leonel E. Lagos *(Florida International University)*, John Bess *(INL)*

Application of Motion Primitives to Train Robotic Behaviors for Nuclear Facility D&D, Young Soo Park, Jonathan Bayert, Dongjune Chang *(ANL)*, Sungmoon Joo, Jonghwan Lee *(KAERI)*

A Drone-Based Automated Radiation Surveillance System, Abdulrahman M. Riyadha, Ahmad M. Elshoubaky, Jamil A. Rihani, Mohammad A. Al-Shabi, Walid A. Metwally, Bassam A. Khuwaileh *(Univ. of Sharjah)*

Reactor Analysis Methods—III
Sponsored by RPD. Session Organizer: Pavel V. Tsvetkov *(Texas A&M)*
Chair: Pavel V. Tsvetkov *(Texas A&M)*, Massimiliano Fratoni *(Berkeley)*

A Unified Form of Stabilized Finite Element Methods for Solving the First-order Neutron Transport Equation, Liangzhi Cao, Chao Fang, Hongchun Wu *(Xi'an Jiaotong Univ.)*

Relaxation of Quasi-Static Approach via Polynomial Interpolation in the Predictor Corrector Quasi-Static Method, T. Oh, Yonghee Kim *(KAIST)*

Unstructured Mesh-Grid Multi-Physics Analysis with Monte Carlo iMC Code for Advanced Fuel Elements, Hyeontae Kim, Yonghee Kim *(KAIST)*

Conceptual Safety Design Report for the Versatile Test Reactor, Doug Gerstner, Jason Andrus, Troy Reiss *(INL)*

Data, Analysis and Operations in Nuclear Criticality Safety—II
Sponsored by NCSD. Session Organizer: Vladimir Sobes *(U.T., Knoxville)*
Chair: William Cook *(SANDIA)*

Impact of Increased Enrichment on Nuclear Analysis Accuracy Due to Cross-Section Uncertainties, Dale Lancaster *(NuclearConsultants.com)*, Charles T. Rombough *(CTR Technical Services, Inc.)*, Fred H. Smith *(EPRI)*

Application of Bootstrap Method to Estimated Criticality Lower-Limit Multiplication Factor Considering Nuclear Data-Induced Uncertainty, Takuto Hayashi, Tomohiro Endo, Akio Yamamoto *(Nagoya Univ.)*

Implementation of Whisper-based Validation at the Hanford Tank Farms, Alyssa Kersting *(Washington River Protection Solutions)*

Design of a Critical Experiment to Validate Yttrium Hydride at Varying Temperatures, T. Cutler, T. Grove, K. Amundson, H. Trellue *(LANL)*

TECHNICAL SESSIONS - 12:15 PM (EDT)

Nuclear Fuels—III
Sponsored by MSTD. Session Organizer: Kenneth J. Geelhood *(PNNL)*
Chair: Kenneth J. Geelhood *(PNNL)*, Kallie Metzger *(Westinghouse)*

Analysis of Graphite Matrix Kinetics and Burn-off Products under Off-Normal High-Temperature Gas-Cooled Reactors Conditions, Brian A. Brigham, Katherine I. Montoya *(Univ. of Texas, San Antonio)*, Tyler J. Gerczak *(ORNL)*, Elizabeth Sooby Wood *(Univ. of Texas, San Antonio)*

Stress Profile in Coating Layers of TRISO Fuel Particles in Contact with One Another, Daniel Schappel, Kurt A. Terrani *(ORNL)*

Fabrication and Characterization Methodology of Transformational Challenge Reactor Fuel Form, Gokul Vasudevamurthy, Micheal Trammell, Dylan Richardson, Brian Jolly, Andrew Nelson, Grant Helmreich, Austin Schumacher *(ORNL)*, Trevor Smuin *(INL)*, Kurt Terrani *(ORNL)*

Reactor Physics Design, Validation and Operational Experience
Sponsored by RPD. Session Organizer: Pavel V. Tsvetkov *(Texas A&M)*
Chair: Pavel V. Tsvetkov *(Texas A&M)*, Massimiliano Fratoni *(Berkeley)*

Minimizing a Class of Azimuthal Power Tilts, James C. Brittingham

Neutronics Benchmark of CEFR Start-up Tests with SuperMC, Bo Chang, Yanting Sun, Bin Li, Qi Yang, Bin Wu *(Chinese Academy of Sciences)*

UUTR Unit Cell Calculations with PENTRAN (S_N) and MCNP6 for Activation Foil Validation Studies, Meng-Jen Wang, Glenn E. Sjoden *(Univ. of Utah)*

Neutronic Consideration of TREAT Facility Fuel SiC Recladding, John D. Bess, Nicolas E. Woolstenhulme *(INL)*

Monte Carlo Transient Analysis of C5G7-TD Benchmark 3D Problems Using McCARD, Sang Hoon Jang, Hyung Jin Shim *(Seoul Nat'l Univ.)*

THURSDAY, JUNE 11
TECHNICAL SESSIONS - 12:15 PM (EDT)

Data, Analysis and Operations in Nuclear Criticality Safety—III
Sponsored by NCSD. Session Organizer: Vladimir Sobes *(U.T., Knoxville)*
Chair: Kristin Smith *(Texas A&M)*, Travis Greene *(ORNL)*

Description and Use of SCALE Sampler Parametric Capability for Engineering Analysis and Optimization, W. J. Marshall, T. M. Greene, B. D. Brickner, R. A. Hall *(ORNL)*

Performing k_{eff} Validation of As-Loaded Criticality Safety Calculations Using UNF-ST&DARDS: Applicable Experiment Selection, W. J. Marshall, J. B. Clarity, K. Banerjee *(ORNL)*

Performing k_{eff} Validation of As-Loaded Criticality Safety Calculations Using UNF-ST&DARDS: Sensitivity Calculations, W. J. Marshall, J. B. Clarity, K. Banerjee *(ORNL)*

Criticality Safety Analysis of Fresh Fuel Storage of Barakah Nuclear Power Plant, Shaikha A. AlShamsi, Batool M. Madani, Walid A. Metwally *(Univ. of Sharjah)*

Why the STEM Community Should Run for Office and How to Do It
Sponsored by YMG. Session Organizer: Timothy M. Crook *(MCR Performance Solutions)*
Chair: Eric Meyer *(Generation Atomic)*

Unimpressed by who you see on your ballot each election? Think you could do better? We want to make YOU a publicly elected professional official! This event will demonstrate why the nuclear profession needs people with STEM expertise writing laws, and we will give YOU the fundamentals of starting a run for public office. Come and speak with our diverse group of panelists that have already expanded their STEM careers through service in local, state, and federal leadership positions as elected officials and candidates for office. Audience members are encouraged to ask questions, get inspired, and wear a lab coat in solidarity when science replaces suits in our seats of public service! Disclaimer: This event includes members from across the political spectrum that have come together in support of science and the rise of science-literate candidates for public office. Any statements made by participants reflect only their individual views, not the views of their employers, the ANS, or YMG-ANS.

Panelists:
Eric Meyer *(Generation Atomic)*
Yehudis Gottesfeld *(Chemical Engineer; Candidate for US House of Representatives)*
Kevin Spears *(IT Professional; City Council Member for Wilmington, NC)*
Andrew Zwicker *(Princeton Plasma Physics Lab; Member of the New Jersey General Assembly)*

Committee/Division/Other Meetings Daily

All times on this page are Eastern Daylight Time (EDT).

MONDAY, JUNE 1ST

Name	Time
Accreditation Policies and Procedures Committee	9AM-10AM
NEDHO	1PM-3PM
Publications Steering Committee-Technical Journals	1PM-3PM

TUESDAY, JUNE 2ND

Name	Time
National Program Committee-NPC National Meeting Subcommittee	11:30AM-1PM
Operations & Power Division-Executive Committee	12PM-2PM
Information Session on Nuclear Engineering PE Exam Module Program	1PM-3PM

WEDNESDAY, JUNE 3RD

Name	Time
Mathematics and Computation Division-Program Committee	11AM-12PM
Mathematics and Computation Division-Executive Committee	12PM-2-PM
Publications Steering-Meetings, Proceedings and Transactions Committee	1:30PM-2PM
National Program Committee-NPC Screening	2PM-3:30PM
Diversity and Inclusion in ANS	3PM-5PM
Professional Engineering Exam Committee-Committee Meeting	3PM-5PM

THURSDAY, JUNE 4TH

Name	Time
Publications Steering Committee	11AM-1PM
Young Members Group-Executive Committee	12PM-1PM
Publications Steering Committee-Book Publishing	1PM-2:30PM
Student Sections Committee	3PM-5PM
Public Policy Committee	4PM-5PM

FRIDAY, JUNE 5TH

Name	Time
Education, Training and Workforce Development Division-Program Committee	2PM-2:30PM
Education, Training and Workforce Development Division-Executive Committee	2:30PM-4PM
Aerospace Nuclear Science and Technology – Executive Committee	3PM-4PM
Government Relations Committee	1PM-2PM

SATURDAY, JUNE 6TH

Name	Time
Fuel Cycle and Waste Management Division-Program Committee Meeting	12PM-1PM
Fuel Cycle and Waste Management Division-Executive Committee Meeting	1PM-2:30PM

For information on how to connect to each meeting visit ansannual.org/program/committee-schedule/

Committee/Division/Other Meetings Daily

All times on this page are Eastern Daylight Time (EDT).

SUNDAY, JUNE 7TH

Name	Time
Local Sections Committee Workshop	11AM-12:30PM
HFICD Program Committee	11AM-12PM
HFICD Executive Committee	12PM-2:30PM
Education, Training and Workforce Development Division - Alpha Nu Sigma	1PM-2PM
Nuclear Criticality Safety Division-Education Committee	1PM-2PM
Nuclear Criticality Safety Division-Program Committee	2PM-3PM
Thermal Hydraulics Division-Program Committee	3PM-5PM
Nuclear Criticality Safety Division-Executive Committee	3PM-5PM
Robotics and Remote Systems Division Committee	3PM-5PM
Nuclear Installations Safety Division - Program Committee	4PM-6PM
Thermal Hydraulics Division-Executive Committee	5PM-6:30PM

MONDAY, JUNE 8TH

Name	Time
NEED Committee	11AM-12PM
Nonreactor Nuclear Facilities Consensus Committee (NRNFCC)	11AM-1PM
Scholarship Policy and Coordination Committee	12PM-1PM
Radiation Protection and Shielding Division-Program Committee	1PM-2PM
Radiation Protection and Shielding Division-Executive Committee	2PM-4PM
Risk-informed, Performance-based Principles and Policy Committee (RP3C)	3PM-6PM
Honors and Awards Committee	4PM-6PM
Nuclear Installations Safety Division - Executive Committee	6PM-8PM

TUESDAY, JUNE 9TH

Name	Time
Standards Board	10:30AM-6PM
Finance Committee	2PM-4PM

WEDNESDAY, JUNE 10TH

Name	Time
Bylaws and Rules Committee	3PM-4PM
Annual Business Meeting	6:30PM-7:45PM

THURSDAY, JUNE 11TH

Name	Time
Board of Directors Meeting	10AM-5PM
Materials Science and Technology Division Executive Committee	7:30PM-9:30PM

Committee/Division/Other Meetings Daily

All times on this page are Eastern Daylight Time (EDT).

FRIDAY, JUNE 12TH

Name	Time
Reactor Physics Division Executive Meeting	4PM -5PM
Reactor Physics Division Program Meeting	5PM-5:30PM
Reactor Physics Division PHYSOR bids presentation and selection	5:30PM-6PM (to start right after the PC meeting)

Monday and Tuesday Night Trivia

Monday: 6 – 7:30pm

Tuesday: 7 – 8:30pm

All registered meeting attendees are invited to register to participate in Monday Night Trivia or Tuesday Night Trivia.

You may register with friends as a team or as an individual and then be assigned to a team.

See you at future

ANS Annual Meetings

2021 ANNUAL MEETING: JUNE 13-17
Omni / Convention Center, Providence, RI

2022 ANNUAL MEETING: JUNE 12-16
Hilton Anaheim, Anaheim, CA

2023 ANNUAL MEETING: JUNE 11-15
Marriott Indianapolis Downtown, Indianapolis, IN

2024 ANNUAL MEETING: JUNE 9-13
The Mirage, Las Vegas, NV