NPRE 199, Undergraduate Seminar

Industry outlook for NPRE degrees

Exelon Corporation, GE Healthcare, Jensen Hughes, U.S. Nuclear Regulatory Commission

12-12:50 p.m. • Room 114, Transportation Building

NPRE 596, Graduate Seminar

Working for the DOE, national labs

U.S. Department of Energy, Los Alamos National Laboratory, Oak Ridge National Laboratory

4-4:50 p.m. • Room 103, Transportation Building

Tuesday, February 21, 2017

Small Group Informational Sessions
2:30-3:45 p.m.

- Exelon Corporation • 103 Talbot
- GE Healthcare • 111K Talbot
- Jensen Hughes • 111 Open Suite
- DOE • TBD
- NRC • 100H Talbot
- Los Alamos National Lab • 220 Talbot
- Oak Ridge National Lab • 220 Talbot

The ANS at Illinois Student Chapter will host a pizza meeting at 5 p.m., Tuesday, February 21, in Room 103 Talbot for NPRE students and SPEED-Interchange guests.

Ed McVey, Director, BWR Core Design; Director, Reactor Engineering Oversight

Ed McVey, BS 1983, has made his career at Exelon. He has held various positions in the Nuclear Fuels organization and has been assigned to three different nuclear power plants. Currently, he is the Director of Core Design for eight boiling water reactor plants.

Jaspreet Rehal, Nuclear Fuels Engineer

Jaspreet Rehal, BS 2013, manages a core monitoring system implementation project at the Dresden and Quad Cities generating stations. He supports nuclear core design activities to ensure NRC compliance. Rehal qualifies customer nuclear analysis software in accordance with corporate procedures to improve task efficiency. He also coordinates programs for 25 interns annually, and mentors new hires to ensure they have a positive and productive experience.

Christian Small, Reactor Engineering Manager

Christian Small, BS 2001, supervises a group of three reactor engineers responsible for proper implementation of sequence exchanges, control rod pattern adjustments, fuel conditioning rules, and other duties commensurate with the proper operation of the reactor core. Small recently won the Modern Day Technology Leader Award at the Black Engineer of the Year (BEYA) Conference in Washington, D.C. While there, he moderated a panel discussion on how to be a successful engineer.
GE Healthcare
GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. The company’s broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems. Headquartered in Chicago, Illinois, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries.

Scott Wollenweber, Principal Engineer, PET Clinical Science
Scott Wollenweber, BS 90, Engineering Physics, has been employed by GE since 1998 and works as part of a systems engineering team making positron emission tomography (PET) systems. He has been a part of teams that integrated PET with CT (2001) as well as with MRI (2014). He works primarily on topics related to system design, algorithms and data processing and analysis. Current projects include lesion detectability measurement, data-derived respiratory gating and system configuration optimization and comparison using image quality and feature quantification measures. Wollenweber earned a PhD from the University of Iowa (Physics, 1996).

Jensen Hughes
Jensen Hughes is a global specialty engineering consulting firm specializing in engineering solutions for nuclear facilities and all critical infrastructure with over 65 offices world-wide. The company has over 36 years’ experience in the nuclear industry working on projects from original design to plant life extension at every U.S. nuclear plant and numerous international nuclear plants. Commonly known for providing expert fire protection engineering, Jensen Hughes has continuously expanded its complementary services through mergers and acquisition, integrating specialty engineering companies to form an engineering solutions provider for nuclear power. Jensen Hughes has nearly 1,200 employees and more than 300 nuclear power experienced engineers with many possessing advanced graduate degrees from top technical universities. The company's senior staff averages over 35 years' nuclear industry experience. A third of the staff maintains licensed professional engineer registrations.

Joe Edom, Senior Corporate Risk Management Engineer
Joe Edom has over 36 years of utility experience in Engineering and Plant Operations. For the past eleven years he has been providing risk analysis and insights in support of PWR station licensing activities focusing on risk-informed license changes and subsequent application of the change, emergent plant operational conditions focusing on the risk impact and regulatory response to the condition, support of the Configuration Risk Management program at the site, fleet and industry levels, including development of on-line risk assessments, and Maintenance Rule program implementation and assessment. Edom’s experience includes 10 years of plant operations experience after obtaining a Senior Reactor Operator license at the Duane Arnold Energy Center.

Nuclear Regulatory Commission
As a collegial body, the Commission formulates policies, develops regulations governing nuclear reactor and nuclear material safety, issues orders to licensees, and adjudicates legal matters.

Ken Riemer, Branch Chief, Chief of Reactor Projects Branch 2, Division of Reactor Projects, NRC Region III
Ken Riemer, BS 1984, currently serves as the Chief of Reactor Projects Branch 2, in the Division of Reactor Projects in Region 3. As a Reactor Projects Branch Chief, Riemer manages the Reactor Oversight Process (ROP) inspection program for the routine and reactive inspections at four assigned nuclear power plant facilities in the Midwest. He joined the NRC in 1990 as a Reactor Engineer. He has held a number of progressively more responsible positions including Resident Inspector, Senior Resident Inspector, Project Engineer, and Chief of the Plant Support Branch in the Division of Reactor Safety. Prior to joining the NRC, Riemer was a Shift Test Engineer and Shift Test Supervisor at the Norfolk Naval Shipyard in Portsmouth, Virginia, where he was qualified on the Navy’s S5W nuclear propulsion plant.
Department of Energy

The mission of the Energy Department is to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions. DOE provides leading-edge, scientifically-based and technically-sound foreign nuclear and energy security analysis that enables U.S. policy makers to address critical issues.

J'Tia Hart, Research Analyst

J'Tia Hart, MS 2005, PhD 2010, is a nuclear engineer currently working at the Department of Energy as a research analyst concentrating on nonproliferation and the nuclear fuel cycle. In addition to her advanced degrees in NPRE, Hart holds a degree in Industrial Engineering from Florida State University. Her doctoral dissertation research encompassed integration of operations research, nuclear engineering theory and techniques to analyze international nuclear fuel supply options. The analyses were accomplished using system dynamics tools and focused on material requirements, nonproliferation and economic measures. Hart has worked at several national laboratories, most recently at Argonne National Laboratory in the area of nuclear export controls and safeguards. Her work focused on analysis of technology as well as nonproliferation cooperation in South America, Sub-Saharan and North Africa. Hart was selected as Finalist for the 2011 White House Fellowship, designed to give exceptional young leaders work experience at the highest levels of federal government. In her spare time she enjoys uses her leadership skills and shares her experiences in outreach to the next generation; most recently as one of the co-chairs of the Argonne/ACT-SO High School Research Program, an in-depth research, mentoring and enrichment program highlighting the talents of African-American high school students of State of New Hampshire and the State of Illinois.

Los Alamos National Laboratory

Los Alamos's mission is to solve national security challenges through scientific excellence.

James L. Hill

James L. Hill, MS 1994, PhD 1998, participates in the Foreign Nuclear Weapons Intelligence Initiative, a component within the Office of the Director of National Intelligence that engages Los Alamos and Lawrence Livermore weapons physicists to analyze and assess nuclear weapons-related intelligence. He also is principal coordinator of the Computational Physics Student Summer Workshop. Hill has worked as part of LANL's Transport Methods group, modeling nuclear test diagnostics, and in the lab's software development operation, to which he contributed to one of the Advanced Strategic Computing (ASC) weapons simulation codes. He began at LANL as a graduate student, working in the Primary Design and Analysis group of the Applied Physics (X) Division. Hill was the primary point of contact for the W78 ICBM warhead and one of the key personnel for assessing nuclear safety, particularly of operations at the Pantex plant in Texas.

Oak Ridge National Laboratory

Oak Ridge National Laboratory is the largest U.S. Department of Energy science and energy laboratory, conducting basic and applied research to deliver transformative solutions to compelling problems in energy and security. ORNL supports its missions through leadership in four major areas of science and technology: neutrons, computing, materials and nuclear.

Prashant Jain

Prashant Jain, MS 2006, PhD 2010, is a research and development staff member in the Thermal Hydraulics and Irradiation Engineering group of the Reactor and Nuclear Systems Division at ORNL. His primary research interests are in computational fluid dynamics, advanced multi-physics simulations, lattice Boltzmann method and parallel scientific software development. At ORNL, Jain is developing an advanced multiphysics safety basis model for the present HEU and the future LEU core of the High Flux Isotope Reactor. He also serves as an independent safety reviewer for the 238Pu production program and a design engineer for the Chinese CRADA project on the molten salt cooled reactors. In addition to his NPRE degrees, he received B.Tech. (2004) from the Indian Institute of Technology (IIT) Bombay.