

## SESSION #2 THERMAL ACTIVITIES BIOGRAPHIES

### Sam Durbin

Dr. Samuel Durbin received his Ph.D. in mechanical engineering from the Georgia Institute of Technology in 2005. He is currently a Principal Member of the Technical Staff at Sandia National Laboratories with over ten years of experience as an experimentalist on large-scale projects.

Dr. Durbin has participated in several multi-disciplinary research efforts including zirconium fires in spent fuel assemblies and offsite mitigation studies of radioactive releases.

He is currently the principal investigator of several projects regarding the safety and security of spent nuclear fuel. Among these is an ongoing effort to study the thermal performance of a dry cask simulator using a single, electrically-heated boiling water reactor fuel assembly.

### Ghani Zigh

Ghani Zigh is a Senior Technical Advisor in the US NRC in the Office of Research. He has a Ph. D. in Mechanical Engineering. He is also a registered Professional Engineer (PE) in the state of New York.

At the NRC, Ghani has been involved in many activities. Among them are: dry cask applications, BWR and PWR Zirc Fire (accident analysis), APWR advanced accumulators, fire analysis, ultrasonic flow meters, and Computational Fluid Dynamics (CFD) Best Practice Guidelines.

Prior to the NRC, he worked at Parsons Brinkerhoff (PB) in Manhattan as an international consultant using CFD (Computational Fluid Dynamics) to model:

- Fire and emergency ventilation for tunnels and train stations
- Effects of thermal pollution of power plants on ocean and rivers
- High Speed trains aerodynamics, and
- Others

He was also a visiting and adjunct professor at Stevens Institute of Technology in New Jersey where he taught undergraduate and graduate classes in thermodynamics, heat transfer, statics, dynamics, fluid dynamics and thermodynamics & fluid mechanics measurements and experiment.



### **John Scaglione**

John Scaglione is the Manager of the Used Fuel Systems Group at Oak Ridge National Laboratory where they are involved in a number of activities regarding spent nuclear fuel and high level waste management as well as radioactive materials packaging testing. He is experienced in the development and use of computational methods for criticality safety, radiation shielding, and reactor analysis; with particular expertise in burnup credit, computational validation, and spent fuel disposal for Department of Energy (DOE) owned and commercial spent nuclear fuel and high level waste. John holds bachelors and master's degrees in Nuclear Engineering from the University of Florida, and has been with ORNL since 2008.

Prior to joining ORNL, John worked on the Yucca Mountain Project where he held various roles supporting and leading the development of the licensing basis for addressing criticality in the geologic repository. John started his career with Framatome (now known as AREVA) in the fuel engineering division simulating reactor core operations, designing waste packages, and performing various spent fuel management activities.

### **Jorge Solis**

Doctor Jorge Solís is a Senior Thermal Engineer in the Office of Nuclear Material Safety and Safeguards of the United States Nuclear Regulatory Commission. In his role, he is responsible for performing technical reviews of spent fuel storage and transportation casks and for developing technical review guidance and CFD best practice guidelines.

He has over 15 years of experience performing thermal analysis of spent fuel storage and transportation casks and spent fuel dry storage facilities, and more than 20 years of engineering experience which includes experience in nuclear engineering (nuclear fuel management and thermal hydraulic design, and transient and accident analysis of commercial nuclear power plants) and review of radioactive materials and spent fuel storage and transportation packages. Doctor Solís received his Ph.D. degree in Nuclear Engineering from Penn State University.