



Biography – Dr. Amir Ali

Professor Amir Ali joined the Nuclear Engineering Department at Idaho State University in fall 2019. His research focuses on experimental and computational analysis of the thermal-hydraulic challenges of advanced reactors, molten salt, and liquid metals-cooled reactors.

Prior to joining the faculty at ISU, Dr. Ali served as a Research Assistant Professor at the University of New Mexico (UNM), where he was a member of the thermal-hydraulic and reactor safety lab, conducting research on multiple projects in the DOE-funded Nuclear Energy University Program (NEUP) and Integrated Research Projects (IRP), in collaboration with national universities, laboratories, and industry. His NEUP and IRP research focused on developing heat exchanger for advanced reactors and investigating the heat transfer performance of Accident Tolerant Fuel (ATF).

Ali also worked on collaborative projects to generate validation experiments for fuel performance simulation codes in INL's Nuclear Energy Advanced Modeling and Simulation Program, and building small-scale molten salt loops for investigating accelerated corrosion of structural alloys in FLiBe, which is a molten salt consisting of a mixture of lithium fluoride and beryllium fluoride that serves as a nuclear reactor coolant and solvent for fertile fissile material.

Ali's other research focus areas include microreactors, heat pipe technology, energy storage systems, and boiling heat transfer on micro-structured surfaces for immersion cooling application. Ali also has been a mechanical engineering consultant for energy building systems including fire protection, HVAC, and plumbing systems.

Ali is a member of the American Society of Mechanical Engineering (ASME) and American Nuclear Society (ANS), and is a reviewer for several engineering journals.