

Graduate Research Assistantships: Fall 2023

Space Nuclear Power, Reactor Thermal-Hydraulics, High Performance Computing and Computational Fluid Dynamics, and ML and AI Methods and Applications to Nuclear Reactors Autonomous Operation and Remote control

The University of New Mexico's Institute for Space and Nuclear Power Studies (<https://isnps.unm.edu>) has open assistantship positions starting Fall 2023 for qualified graduate students with relevant experience in the one of more of the listed areas to participate in cutting-edge engineering research.

Experience and Expertise:

- Computational fluid dynamics (CFD) and thermal-hydraulic analysis methods of energy systems
- CFD methods and codes such as STAR-CCM+ and MCNP modeling and analyses
- Small modular and microreactors design and modeling
- knowledge of control theory and Machine Learning and AI methods and their applications to Autonomous control and operation of microreactors, data mining, and training digital control systems.
- Computer programming and transient modeling using MATLAB Simulink.
- Operation, modeling, and analysis of heat pipes for space nuclear power applications.
- Finite Element thermal and structural analysis.

Preference will be given to qualified applicants with prior research experience, and an earned MS degree in nuclear, chemical, mechanical engineering, or closely related fields. Those from minorities and traditionally underrepresented groups are strongly encouraged to apply.

Desirable skills:

- Excellent technical writing, oral and verbal communication
- Ability to work independently with little supervision.
- Interact effectively with other members of the research team.
- C and python programming
- CAD, 3D printing and additive manufacturing.
- Experiments design , instrumentation, and data acquisition skills

Those interested please send a CV detailing education background, prior research and professional experience, list of prior publications to Dr. Timothy M. Schriener, Email: schrient@unm.edu.