THE UNIVERSITY of TENNESSEE
KNOXVILLE
Department of Nuclear Engineering
COLLEGE OF ENGINEERING

315 Pasqua Engineering Building
Knoxville, TN 37996-2300
865-974-2525
utne@utk.edu
http://www.engr.utk.edu/nuclear/

Postdoctoral Fellow Position in the Nuclear Engineering Department at the University of Tennessee

There is an immediate opening for a Postdoctoral Researcher in the Department of Nuclear Engineering at the University of Tennessee (https://ne.utk.edu) to support a new, three-year grant from the Department of Energy. The research project will focus on the design, construction, and implementation of the next generation neutron imaging sensor for radiography, tomography, and energy resonance imaging. The specialization for this position is on front-end circuit design and implementation with an emphasis on large channel systems (i.e., FPGA programming), ideally in the area of radiation detection system development. Further, the successful candidate will benefit from a background in the following areas: understanding of semiconductor-based electronic systems; analog and digital pulse processing; statistical analysis of radiation-induced electrical signals and data acquired with radiation detection pulse processing systems; and/or concepts and challenges related to high spatiotemporal resolution imaging. The candidate must be able to communicate effectively in order to perform research in a collaborative environment. Other desirable skills include familiarity with radiation detector materials development, semiconductor processing, and advanced computational methods (e.g., electrodynamic, radiation transport, and/or machine learning).

Activities of this position will include individual research, managing the short-term objectives and tasks of externally funded research, and mentoring a team of undergraduate and graduate student researchers. Travel to various DOE neutron user facilities is required to test the developed neutron imaging sensors. The successful candidate is expected to conduct original research and disseminate results via peer-reviewed journal publications and conference presentations. The candidate may also help with proposal writing and teaching classes, so this experience will be good preparation for a tenure track position.

Knoxville, a vibrant and growing city, is nestled at the base of the beautiful Smoky Mountains. Knoxville was recently rated the “best place in the U.S. for new college graduates to live and work” by the ERI Economic Research Institute, a compensation research firm specializing in salary survey and cost-of-living studies. This comes on the heels of Knoxville’s “ninth hottest area of the country to do business” ranking and a five-star rating for quality of life.

The Knoxville-Oak Ridge area is a national powerhouse in nuclear science and engineering research and industry. The partnership between UT and the nearby Oak Ridge National Laboratory, the nation’s largest science and energy national laboratory, is especially significant. Faculty members and student and staff researchers often work on joint programs with ORNL, sometimes in part time residence at ORNL. The local area is also the home to 100+ nuclear-related companies.

Candidates must possess a doctoral degree in nuclear engineering, physics, materials science and engineering, electrical and computer engineering, or a related field. Candidates may apply by submitting a statement of interest, CV, and three professional references to Dr. Eric Lukosi at elukosi@utk.edu. More information on Dr. Lukosi’s research activities is available at http://web.utk.edu/~elukosi/.