ILLINOIS

THE GRAINGER COLLEGE OF ENGINEERING
Department of Nuclear, Plasma, & Radiological Engineering
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Urbana, IL 61801

MULTIPLE POSITION OPENINGS FOR PH.D. STUDENTS AND POSTDOCTORAL RESEARCH ASSOCIATES AT THE RADIATION AND DETECTION IMAGING LAB (UIUC)

The Radiation and Detection Imaging Laboratory (http://radimg.npre.illinois.edu/) directed by Prof. Ling-Jian Meng in the Department of Nuclear, Plasma and Radiological Engineering and in the Department of Bioengineering at the University of Illinois at Urbana Champaign (UIUC) has **multiple openings** for highly motivated candidates for

- fully-funded Ph.D. positions
- full-time positions at the Post-doctoral Research Associate level.

The successful candidates are expected to participate in several ongoing research projects funded by NIH to develop clinical and preclinical SPECT instrumentation for imaging of cancer, cardiovascular diseases, and brain disorders, and a newly funded project to develop a full-body clinical SPECT system for imaging targeted alpha-particle radiotherapy.

These open positions are based on a highly diversified collaborative environment, where the research projects naturally involve collaborations with leading groups in sensor development, industry partners in detector and imaging instrumentation, and clinical collaborators from University of Chicago, Yale University and Johns Hopkins University on preclinical and clinical research.

The major responsibilities, commensurate with the experience at the predoctoral or postdoctoral level, will include one or more of the following areas: (a) developing novel imaging sensors (based on CdTe, CZT, and other emerging semiconductor materials) and large-scale readout electronics; (b) developing data processing techniques based on machine-learning; (c) working closely with our academic and industrial partners to develop a full-body clinical SPECT imaging system for imaging targeted alpha therapy, and (d) publishing peer-reviewed journal/conference papers and presenting original research at conferences.

Ph.D. Student Positions

The requirements for this position are: B.S. or M.S. degree in Physics, Electrical Engineering, Nuclear Engineering or other related disciplines; strong mathematical, coding, and communication skills; interest and motivation in performing experimental studies for radiological imaging applications at the intersection of biology, physics and chemistry.

Prospective graduate students should apply to one of the following graduate programs at UIUC:

• Nuclear, Plasma and Radiological Engineering (https://npre.illinois.edu/admissions/graduate)

• Bioengineering (https://bioengineering.illinois.edu/admissions/graduate)

Interested candidate(s) should contact Professor Ling-Jian Meng at ljmeng@illinois.edu. The positions are open from January 2023.

Postdoctoral Research Associate Positions

The requirements for this position are: Ph.D. degree in Physics, Electrical Engineering, Nuclear Engineering or other related disciplines; solid experiences in some of the following areas: semiconductor detectors, readout electronics, firmware programming, and radiological imaging instrumentations. Experiences in Monte Carlo simulations and data processing with C++ and MATLAB are preferred. Knowledge in machine/deep learning and high-performance computing is a plus but not required.

This will be a full-time appointment for two years with the possibility of renewal based on performance and availability of support.

Interested candidate(s) should send the CV and the names and contact information of TWO references to Prof. Ling-Jian Meng at ljmeng@illinois.edu. The positions are open for an immediate start from August 2023.