Postdoctoral Fellow Position: Nonlinear Optical Microscopy and Computational Imaging for Low-Dose Radiation Biomarkers

The Laser-Assisted Medical Physics and Engineering Laboratory (LAMPE Lab) led by Dr. Sangeeta Murugkar in the Department of Physics at Carleton University is inviting applications for a postdoctoral fellow position available immediately. The goal of this cutting-edge multidisciplinary project involving nonlinear optical microscopy, Artificial Intelligence (AI)/bioinformatics, and radiation biology, is to identify biomarkers that show how biological cells and tissue respond to low-dose ionizing radiation. The two-year project is funded by the Natural Sciences and Engineering Research Council of Canada (NSERC) Alliance grant in collaboration with partners in industry and government.

The candidate must have a Ph.D. degree in physics, chemistry, biomedical engineering, optical engineering, biophysics, or a related field. Required qualifications:

1. Knowledge of nonlinear optical microscopy such as SRS/CARS, TPEF and SHG with hands-on optics experience related to ultrafast imaging and/or spectroscopy preferred
2. Experience applying machine learning or deep learning techniques to microscopy images for preprocessing and analysis is a plus
3. Computer programming skills in various languages, *e.g.*, Matlab, python, C++
4. Demonstrated writing (in English) and excellent communication skills
5. Independent analytical thinking and Creativity

Interested applicants are requested to submit the following:
1. A cover letter describing your research interest in applying for this position, as well as when you would be available to start.
2. A curriculum vitae, including a list of publications and relevant experience.
3. Contact information for three professional references.

We are committed to fostering diversity within our community as a source of excellence, cultural enrichment, and social strength. We are active in advancing Equity, Diversity, and Inclusion (EDI) and we encourage applications from individuals committed to advancing EDI. All qualified persons are encouraged to apply.

Contact: Professor Sangeeta Murugkar, smurugkar@physics.carleton.ca