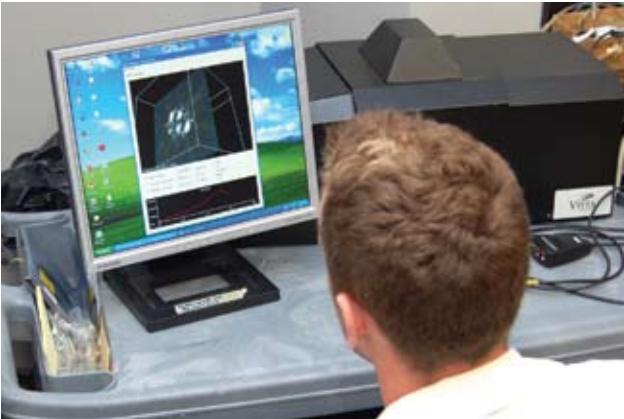


Life in London

With a population close to 430,000, London is Canada's 10th largest city. It is located two hour's drive south west of Toronto. The city is built on the River Thames and is graced with beautiful parks and miles of paved riverside walking and biking trails. London is home to Covent Garden Market, the John Labatt Centre (home ice to the wildly successful London Knights OHL team), the Grand Theatre and Fanshawe Pioneer Village, among many other sporting and cultural institutions. Victoria Park plays host every summer to a string of festivals and concerts. London is within easy driving distance of the Great Lakes and other major Canadian and U.S. cities. See: <http://www.london.ca>

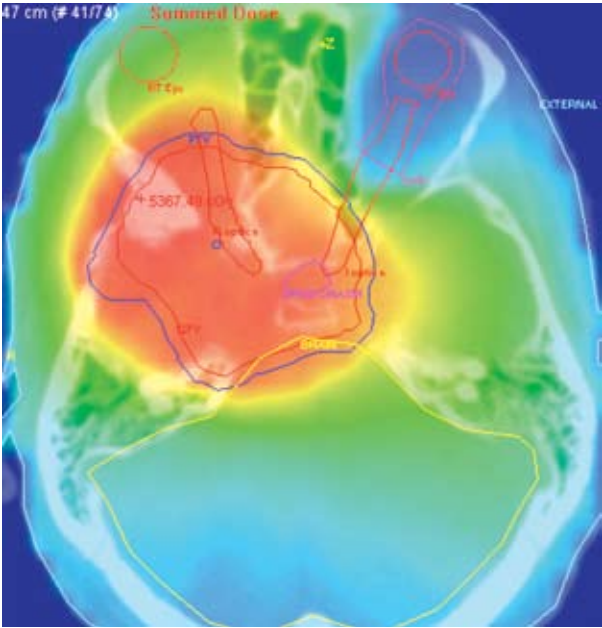


Cost of Living

Off-campus apartments
 1 bedroom: \$300-\$1,000
 2 bedroom: \$700-\$1,100

On Campus apartments
 1 bedroom: \$ 550
 2 bedroom: \$650-\$790

Assignment is based on lottery. Residences for married couples and families are available, and prices are based on total family income.



Why Western?

London and Western have a long tradition of excellence in medical physics research, fostered by the close relations among the Department, University Hospital, Lawson Health Research Institute (LHRI), the London Health Sciences Centre (LHSC), the London Regional Cancer Program (LRCP), and the Robarts Research Institute (RRI), and biomedical companies.

We offer an attractive environment for graduate study:

- Competitive stipends
- Rich variety of research areas
- Extensive facilities for experiment and computation
- Attractive financial arrangements for scholarship holders
- Flexible starting dates: January, May or September
- Opportunities for interdisciplinary or collaborative research

Contact Us:

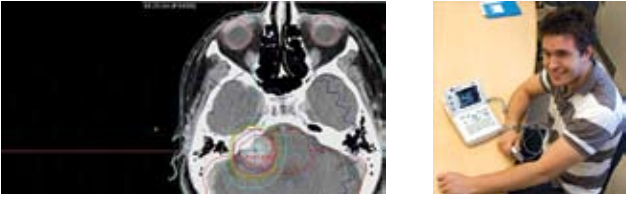
Anne Brooks
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Graduate Program in Medical Physics



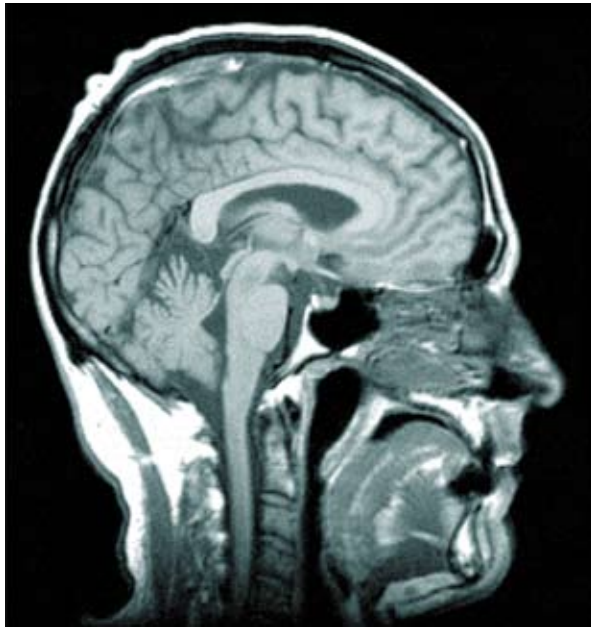
Western's award winning faculty members, cutting edge research and interdisciplinary environment give you the tools to engage your imagination.



The University of Western Ontario

What is Medical Physics?

Medical physics applies physical concepts to the study, diagnosis, and treatment of disease. Examples are the development of imaging techniques, such as magnetic resonance imaging (MRI), ultrasound, and computed tomography (CT); the modelling and development of radiation techniques for cancer therapy; and the modelling and measurement of physiological processes, such as cellular interactions, blood flow, and disease progression.



Western's Collaborative Environment

Western quite uniquely has three very strong and collaborative academic programs related to multidisciplinary biophysics research:

1. Medical Physics within the Department of Physics & Astronomy (undergraduate and graduate) which is in the Faculty of Science
2. The Department of Medical Biophysics (undergraduate and graduate) which is in the Schulich School of Medicine & Dentistry
3. And the Biomedical Engineering graduate program in the Faculty of Engineering.

Most faculty members in Western's biomedical (medical physics) community have cross-appointments in all three departments, and hence they teach and supervise students through all three departments. Collectively, these three programs enable students coming from a variety of backgrounds to continue training in their specific discipline while taking on multi-disciplinary research.

Physics (Medical Physics) primarily accepts physics students and continues a physics-based training in terms of courses (e.g. tackling more of the physics in a radiation course than would be done in a course targeted at biologists), alongside the chosen medical physics research. Similarly, Biomedical Engineering (BME) primarily accepts engineers. Medical Biophysics is more open-ended and can accommodate any background.

This network of scientists, programs, and research areas means that in essence, a student can select the program most appropriate to his or her background and then select a research project and research supervisor generally independent of the chosen program.

Research Interests

Ongoing research in Medical Physics includes:

- development of a field-cycled MRI high strength gradient system
- human peripheral nerve stimulation in MRI gradient systems
- ultrasound imaging & modelling
- Doppler ultrasound techniques for hemodynamics
- hemodynamic (blood flow) studies and simulations
- radiation dosimetry and modelling
- radiation therapy and imaging for cancer
- electromagnetic field modelling and measurement in biological systems
- positron emission tomography (PET)
- dual-modality imaging techniques (PET/CT and PET/MRI)
- single-photon emission computed tomography (SPECT) for quantitative cardiac applications
- high-resolution & animal SPECT imaging
- elastic properties of cells studied by atomic force microscopy
- biomineralization



Faculty

The core Medical Physics Faculty located within the Department of Physics & Astronomy are:

Prof. Blaine Chronik

- Canada Research Chair in Medical Physics
- Assistant Professor, Department of Physics and Astronomy
- Assistant Professor, Department of Medical Biophysics

Magnetic Resonance Imaging; Positron Emission Tomography; multimodality imaging systems; MRI gradient coils; electromagnetic peripheral nerve stimulation in humans.

Prof. Tamie L. Poepping

- Assistant Professor, Department of Physics and Astronomy
- Assistant Professor, Department of Medical Biophysics

Ultrasound (imaging and Doppler) research and system development; hemodynamic (blood flow) studies and simulations; particle imaging velocimetry studies

Prof. Eugene Wong

- Associate Professor, Department of Physics and Astronomy, Medical Biophysics and Oncology
- Associate Scientist, London Regional Cancer Program, Lawson Health Research Institute
- Fellow of the Canadian College of Physicists in Medicine, FCCPM

Radiation oncology physics; image-guided radiotherapy; treatment optimization; adaptive radiotherapy.