



Postdoctoral Fellow in Medical and Biomedical Imaging Physics – Personalized 3D Printed Brachytherapy Implants**

The medical physics research group (physmed.fsg.ulaval.ca) and the Biomaterials for Medical Imaging research group (www.bim.fsg.ulaval.ca) at Université Laval (<http://www.ulaval.ca>) are seeking a postdoctoral fellow to work with supervisors [Luc Beaulieu](#) and [Marc-André Fortin](#) on a cutting edge project recently financed by the Canadian Institutes of Health Research. The project brings together clinicians, biomaterial scientists and medical physics experts.

Required qualifications:

- PhD in physics, medical physics or a closely related discipline.
 - Knowledge of radiation therapy physics and demonstrated experience with MRI and CT are pluses.
- Advanced C++ and /or Python programming skills
- Working knowledge of Monte Carlo simulations in medicine
 - Proficiency with Geant4 (and/or TOPAS) preferred
- Demonstrated writing and communication skills, through publications and conference presentations in relevant venues.
 - Publications with application of the Monte Carlo method in the context of radiation, medical physics and medical imaging (preferred)
- Experience collaborating with interdisciplinary teams.

The successful applicant will be based at CHU de Québec – Université Laval, one of the major research hospitals in Canada. Our institution is a pioneer in the field brachytherapy as well as development of ^{103}Pd -loaded gold nanoparticles. This position is part of a larger project that combines this expertise with the recent acquisition of state-of-the-art 3D printing research infrastructure allowing to develop 3D printed ^{103}Pd -loaded eye plaques. The technology would be adapted to each patient and be specific to tumour geometry. The candidate will be working with this multidisciplinary team in the design, simulation and experimental validation of a novel approach to ocular cancer brachytherapy treatments, with a special focus on Monte Carlo modeling and high precision dosimetry.

Screening of applicant will begin immediately, until a suitable applicant is found. Base salary (excluding benefits*) will be 40 000 CAD\$.**

Application should be sent to beaulieu@phy.ulaval.ca in a single PDF document and should include:

- A letter of presentation stating when you would be available to start, clearly describing how you meet all of the requirements stated above and why you are a good fit for this position.
- A detailed complete CV, including a publication list that give in separate sections : journal publications, conference proceedings, abstracts and invited talk and, finally, social involvement and leadership skills.
- A separate document giving a short statement about your career goal(s).
- Your doctoral studies transcript and a copy of the diploma or proof of successful thesis defense and a copy of the statement confirming final submission of the thesis.

- For academic transcripts from institutions outside of North America, the applicant must explain the grading system in effect. For original transcripts and diploma issued in a language other than English or French, a translation must be provided.
- A list of three potential referees (to be contacted at a later stage if the application pass screening).

Screening of applicants will begin immediately and will continue until a suitable applicant is found. Université Laval adheres to the [Tri-Council Granting Agency Equity, Diversity and Inclusion \(EDI\) statements](#).

*This position is initially for 1 year (renewal possible).

** Postdoctoral fellows funded by research projects are unionized and covered by a collective agreement. Benefits equivalent to approximately 20% of the salary paid must be added to the budget, as well as an annual 2% salary increase at the end of March each year.