

November 1st, 2014

Postdoctoral and PhD student positions in Novel Optical Fibers for Second Harmonic Generation.

Carleton University (Ottawa, Canada) and Université Laval (Québec, Canada)

The Advanced Photonic Components group at Carleton University has openings for Postdoctoral Fellow and for a PhD student beginning January 1st, 2015 (or as soon as a qualified candidate is found). The project consists of developing a new kind of silica glass optical fiber with a radially structured core designed to introduce a large second order nonlinearity in the material. The purpose of such structure is to build a "frequency doubling" fiber to extend the wavelength ranges of fiber lasers in a monolithic fashion. The project is carried out in collaboration with the Université Laval, more specifically with Prof. Younès Messadeq (Canada Research Excellence Chair in Photonic Innovation) and Prof. Réal Vallée (Director of the Center for Optics, Photonics and Lasers), and also with CORACTIVE Inc., a specialty fiber optic manufacturer based in Quebec City.

The research will consist of experimental and theoretical investigations into the optimum layer structure for the fiber core, based on preliminary results obtained on planar structures (Optics Express 19, 26975 (2011)). Once these conditions are established, the fibers will be processed in order to introduce the necessary nonlinearity and their second harmonic generation efficiency tested. The project team will include one Postdoctoral fellow, two PhD students and one MASc student, as well as technologists and the co-investigators.

This project is funded by NSERC for a three year period.

Interested candidates should send a Curriculum Vitae, plus a full list of publications and other measures of output, as well as the names and contact information for at least 2 references. For the Postdoctoral Fellow, a condition for eligibility is that applicants must have earned their first PhD within the last two years or expect to have completed the requirements for a PhD (including thesis defence) within the next few months.

All applications should be via email to : jacques_albert@carleton.ca. The position will remain open until staffed

Prof. Jacques Albert
(Canada Research Chair in Advanced Photonic Components)
Prof. Christopher Smelser
(Coordinator of the Photonics and Laser Technology Program, School of Information Technology)