Postdoctoral Fellowship in Concurrent Optimization

Applicants are sought for a postdoctoral fellowship devoted to developing and implementing new algorithms for the concurrent solution of large and difficult optimization problems (linear, nonlinear, global, discrete, etc.). This is timely and important research for several reasons: (i) the now universal availability of multi-core machines as well as easy access to cloud computing, (ii) the increasing need to solve ever-larger optimization problems based on massive data sets, and (iii) the much improved ability to write concurrent programs in the newest generation of concurrent programming languages.

A main theme of the work will be the concurrent use of relatively simple approximate algorithms in solving the overall optimization problem. The goal is the development of new classes of efficient and effective algorithms, their implementation in proof-of-concept software, and the publication of this original research.

Applicants should have well-developed skills in software development and programming (facility in C/C++ is desirable due to the need to interface with existing software such as modeling languages), as well as familiarity with optimization algorithms. Applicants should have an excellent research track record, a good command of English, and have completed or be very near to completing their PhD degree in a suitable related field (engineering, computer science, mathematics, business, etc.).

The successful applicant will work with Prof. John Chinneck (www.sce.carleton.ca/faculty/chinneck.html) in the Department of Systems and Computer Engineering (www.sce.carleton.ca) at Carleton University (www.carleton.ca) in Ottawa, Canada. The Department has a large and active graduate program, and together with the Department of Electronics forms one of the largest Electrical and Computer Engineering clusters in Canada.

As the national capital, Ottawa has numerous museums and cultural activities as well as easy access to wilderness areas for sports such as canoeing, kayaking, skiing, hiking, etc. The city is directly linked to the francophone province of Quebec via several bridges, and the city of Montreal is just two hours away by car or train. By air it is one hour to Toronto and 1.5 hours to New York City, Boston and other cities in the northeastern USA.

Direct applications and queries to Prof. Chinneck at chinneck@sce.carleton.ca.