



DEPARTMENT OF APPLIED MATHEMATICS

應 用 數 學 系

**The Hong Kong Polytechnic University  
Department of Applied Mathematics**

**Colloquium**

**Optimizing structured problems without derivatives and other new  
developments in the BFO package**

by

**Prof. Philippe TOINT**

**University of Namur, Belgium**

**Abstract**

The talk will introduce techniques that allow the solution of large structured optimization problems in the context of random pattern search in nonlinear optimization. They result from a re-interpretation of techniques proposed by Price and Toint, but introduce some significant new ideas which prove to be very efficient. Examples will be shown where partially separable problems in more than 10000 variables are solved by the BFO package with a very small number of (complete) function evaluations. If time allows, a short review of other new features of the derivative-free optimizer BFO will be presented, covering the support of categorical variables, new optimizer's training strategies and options-file features.

This work is co-authored with M. Porcelli.

**Date : 27 February, 2017 (Monday)**

**Time : 2:30p.m. – 3:30p.m.**

**Venue : TU801, The Hong Kong Polytechnic University**

**\*\*\* ALL ARE WELCOME \*\*\***