Introduction to Optimisation Course

This course will provide an introduction to concepts in problem formulation and solution methods for linear, nonlinear and mixed-integer problems. The course will be primarily focused on local optimisation methods, with a brief introduction to global optimisation. It is designed for industry practitioners and will provide an overview of the types of problems that can be solved with today's tools and some hands-on experience. No prior knowledge of optimisation is assumed. By the end of the course, users will have an understanding of how to approach the formulation and solution of optimisation problems. They will be ready to attend the Advanced Optimisation Course.

Thursday 10 May 2018

09.00 - 09.30 Coffee and Registration
09.30 - 09.45 Introduction and Welcome – Professor Claire Adjiman
09.45 - 10.00 Why Optimisation? – Professor Claire Adjiman
10.00 - 11.20 Nonlinear Programming (NLP) - Professor Claire Adjiman
11.20 - 11.30 Break
11.30 - 12.45 GAMS and NLP Exercise - Professor Claire Adjiman
12.45 - 13.45 Lunch
13.45 - 15.45 Linear Programming (LP) Theory – Dr Benoît Chachuat
15.45 - 16.45 Linear Programming Exercise – Dr Benoît Chachuat

Friday 11 May 2018

09.00 - 09.30 Coffee and Registration
09.30 - 10.00 Introduction to Mixed-Integer Programming (MIP) – Dr Gonzalo Guillén-Gosálbez
10.00 - 11.00 MIP Exercise – Dr Gonzalo Guillén-Gosálbez
11.00 - 12.00 Introduction to Global Optimisation (GO) – Dr Ruth Misener and Mr Miten Mistry
12.00 - 13.00 Lunch
13.00 - 14.00 Global Optimisation Exercise - Dr Ruth Misener and Mr Miten Mistry
14.00 - 17.00 Optimisation Surgery – Bring your own optimisation problem

End of course