

Who Should Attend?

This workshop series is specially designed to provide insight into the discipline of optimisation for a wide range of individuals such as OR professionals & financial quantitative analysts, risk analysts, consultants, DSS application developers, and academics. Everyone can benefit from a clear presentation of optimisation and how it is applied to solve business problems.

OR Professionals: This workshop series will help you to get up-to-date on the latest methodologies and receive exposure to the wide range of technologies and software now available in the field of optimisation.

Quantitative Analysts / Risk Analysts: This workshop series gives you an overview of the wide range of the technologies available allowing you to define and conceptualise your business problem in terms of an optimisation problem.

Software Developers/IT: This workshop series provides instruction on how to embed optimisation models into software applications. It will also give you all the necessary information and techniques in order to understand optimisation modelling and data modelling integration.

Academics and Students: Take advantage of our application focused examples to view optimisation from a business perspective, as well as receive hands-on experience with leading optimisation software.

CARISMA - IIM Calcutta Workshop Optimisation Methods and its Financial Applications, High Frequency Finance

Date: 10 – 13 March, 2010

Workshops:

**Introduction to Optimisation & its Applications:
Linear & Integer Programming:
Modelling Systems and embedded DSS**

10 March - 11 March 2010

**Stochastic Optimisation Techniques and Risk
Analysis: Applications in Finance, High Frequency
Finance**

12 March - 13 March 2010

Venue:

Financial Research and Trading Lab, IIM Calcutta

www.carisma.brunel.ac.uk

Benefits

At the end of the workshop, the participants will be able to develop their own optimisation models, link them to data sources and solve the models using state-of-the-art commercial solvers.

Participants will also acquire a good knowledge on how to embed optimisation models into applications.

By attending this workshop you will be able to:

Build your own optimisation applications.

Identify the best use of optimisation techniques and how to deploy them for your purposes.

Gain an insightful and realistic view on the use of optimisation for business applications.

Prepare and consolidate data from disparate sources for optimisation applications. Identify solving and fine-tuning requirements in your optimisation applications.

Software Used

The workshop is designed to give the participants hands-on experience with industrial optimisation tools, including:

AMPL COM
Object by Optirisk Systems
FortMP Solver from Optirisk Systems
CPLEX Solver from ILOG
Microsoft Excel and Access
SPInE (Stochastic Programming Integrated Environment)

Introduction to Optimisation and its Applications: Linear & Integer Programming - Modelling Systems and embedded DSS

■ 10 March - 11 March 2010

Background

Optimisation technologies have become key tools in making important business decisions that increase competitive advantage. Optimisation, through the use of advanced mathematics and computer science techniques, is used to assist organisations with solving their complex business problems in areas such as manufacturing, distribution, finance and scheduling. The success of optimisation projects depends on many different factors such as which modelling tools are used, integration with corporate data and the selection of the most efficient solution algorithms available for the problem. The purpose of this optimisation workshop is to provide participants with an insightful overview and give step-by-step instructions for successfully building optimisation applications.

In this workshop, our instructors, who all have years of experience in this field, will take you through all the steps of an optimisation project using powerful optimisation tools such as CPLEX, FortMP, FortSP and AMPL Studio. The purpose of the workshop is to show how optimisation models, relational data and optimisation algorithms can be brought together in one cohesive business application.

This workshop is an advanced course designed to benefit individuals with various levels of optimisation knowledge. Some previous exposure to optimisation is helpful.

Overview

We introduce optimisation modelling using an algebraic modelling system and help delegates develop an understanding of how to formulate real-world optimisation models.

Furthermore, we cover advanced modelling concepts such as highly sparse large-scale models and how to formulate models with integer variables and logical constraints. We also guide participants to learn the tools and methods used for embedding optimisation into business applications including Excel and Access from Microsoft Office.

Introduction to Optimisation Modelling and Solving

- Fundamental modelling techniques and model development
- Formulating models with a Modelling System
- Solving models with MATLAB, CPLEX, FortMP
- Discrete Optimization Models and Methodologies
- Fine tuning of optimisation applications for performance
- Model validations and sensitivity analysis
- Common modelling mistakes and how to avoid them.

Advanced Optimisation Modelling

- Special model formulations
- Integer/binary variables
- Logical constraints
- Advanced indexing techniques for sparse data
- Data instantiation techniques
- Scalability for large optimisation models
- Developing solution heuristics using a script language
- Hints and tips for managing your data
- Common data problems and how to avoid them

CARISMA - IIM Calcutta Workshop

Optimisation Methods and its Financial Applications, High Frequency Finance

10 —13 March 2010

VENUE: Financial Research and Trading Lab, IIM Calcutta
 You can use this form to book your seat
The last date of registration is 3 March 2010

Please book me on the event(s) ticked opposite

- Please send further information on the related event ticked in the list Opposite
- I cannot attend but wish to purchase the event documentation ticked in the list opposite
- I am interested in an in-house course

Delegate

Dr/Mr/Ms/Mrs.....First Name.....

Surname.....

Position.....

Head of Department.....

Contact Details

Organisation.....

Address.....

.....

.....

Tel.....

Fax.....

Status:

-
- PhD Student
- Academic or Researcher
- Industry

Fee

Place and date.....

Signature.....

Tel.....

Events - Please tick as appropriate

- Introduction to Optimisation and its Applications, 10 — 11 March 2010
- Stochastic Optimisation Techniques and Risk Analysis: Applications in Finance, High Frequency Finance, 12 — 13 March 2010

Four easy ways to book

1. Fax this page: 033-24677851
2. Post to: Asst. Manager-Financial Research and Trading Lab, Indian Institute of Management. D.H. Road. Joka. Kolkata 700104. INDIA
3. Email: asstmgr_finlab@iimcal.ac.in
4. Telephone: +91-9830864636

Registration Fees (in INR)

Students	3000
Academic & Researchers	6000
Industry	20000

For sponsorship and group booking contact:

asstmgr_finlab@iimcal.ac.in

Registration Details

The registration fee for the event covers the following: Attendance, copy of the documentation, lunches and light refreshments. Accommodation is not included. Detailed delegate information will be sent to you approximately two weeks before the event. Payment is required in advance of the event or at the latest, paid at the event. Payment "may be made by par cheque or demand draft drawn in favour of Indian Institute of Management Calcutta" payable at Kolkata .

WHAT HAPPENS IF I HAVE TO CANCEL?

Confirm your CANCELLATION in writing up to 15 working days before the event and receive a refund less a 10% service charge. Regrettably, no refunds can be made for cancellations received less than 15 working days prior to the event.

SUBSTITUTIONS are welcome at any time.

The organisers reserve the right to amend the programme if necessary.

INDEMNITY: Should for any reason outside the control of Indian Institute of Management Calcutta/ OptiRisk Systems, the venue or the speakers change, or the event be cancelled due to industrial action, adverse weather conditions, or an act of terrorism, Indian Institute of Management Calcutta/ OptiRisk Systems will endeavour to reschedule, but the client hereby indemnifies and holds Indian Institute of Management Calcutta/ OptiRisk Systems harmless from and against any and all costs, damages and expenses, including attorneys fees, which are incurred by the client. The construction validity and performance of this Agreement shall be governed by all aspects by the laws of India to the exclusive jurisdiction of whose court the Parties hereby agree to submit.