Imperial College London

Summer School on FINANCIAL DERIVATIVES

May - June 2006

Institute for Mathematical Sciences

In collaboration with

The Centre for Professional Development, Imperial College London

A Centre for Professional Development Programme

INTRODUCTION

The Institute for Mathematical Sciences at Imperial College London is delighted to announce the Summer School on Financial Derivatives 2006 as part of the College's Programme for Professional Development.

The explosive growth in the trading of financial derivatives together with the increasing sophistication of risk management and investment markets, marks the pace of London investment banking firms and academic research groups.

The Summer School on Financial Derivatives has developed into a key annual event, which marks the progress of research in derivatives across all asset and model classes and trend-setting innovations.

This event is designed as an exciting forum where senior executives and academics can discuss the latest cutting-edge issues. This is one of the leading initiatives of the Institute for Mathematical Sciences aimed at bridging the gap between mathematical research and practical challenges, thus creating an invaluable partnership between academia and the industry.

WHO SHOULD ATTEND THE SUMMER SCHOOL ON FINANCIAL DERIVATIVES?

The Summer School on Financial Derivatives at Imperial College London offers a varied and sophisticated agenda. It will present a unique combination of in-depth workshops taught by leading practitioners and researchers with expertise in exotic derivatives. The event has been designed for professionals with an interest in this emerging field.

This Summer School will be of specific interest to Financial Engineers, Quantitative Analysts and Researchers in the following areas:

- Equity, interest rate and FX exotics
- Hybrid derivatives
- Commodity derivatives
- Credit derivatives and structured products
- Credit portfolio trading
- Emerging markets.

WEEK 1: INTEREST RATE DERIVATIVES

Managing Smile Risk

2 May ■ PATRICK HAGAN *Brevan Howard Asset Management, London*

Local volatility models are the most popular method for pricing and hedging options in the presence of market smiles and skews. A careful analysis of these models show that they predict that market smiles move in the opposite direction as the price of the underlying asset, contrary to all trading experience. This difference causes the hedges to be unstable, which can lead to serious 'leakage' in option books. A deeper look at the theory leads us to a stochastic volatility model, the SABR model. We solve this model to obtain an explicit, closed form solution for the implied volatility. This solution shows good agreement with the observed volatility smiles. More importantly, it shows that the SABR model predicts the correct smile dynamics, which leads to stable hedging of our skew/smile exposures.

Stochastic Volatility Term Structure Models for Constant Maturity Swaps

2 May ■ MANLIO TROVATO *Merrill Lynch, London*

It is widely recognized that fixed income exotics should be priced by means of a stochastic volatility model.

Callable constant maturity swaps (CMS) are a particularly interesting case due to the sensitivity of swap rates to implied swaption volatilities for very deep out of the money strikes.

I present a stochastic volatility term structure model based on a continuous time lattice which allows for a numerically stable and quite efficient methodology to price fixed income exotics in this class.

Implied Calibration of Stochastic Volatility Jump Diffusion Models

3 May ■ STEFANO GALLUCCIO *BNP-Paribas, London*

In the context of arbitrage-free modelling of financial derivatives, we introduce a novel calibration technique for models in the affine-quadratic class for the purpose of contingent claims pricing and risk-management.

In particular, we aim at calibrating a stochastic volatility jump diffusion model to the whole market volatility surface at any given time.

We numerically implement the algorithm and show that the proposed methodology is both stable and accurate.

Spectral Methods for TARNs, Range Accruals, Ratchets and Other Path-Dependent Derivatives

3 May ■ CLAUDIO ALBANESE *Imperial College London*

This presentation concerns a class of path-dependent fixed income derivatives including target redemptionn notes (TARNs), ratchets and range accruals.

To correctly price these payoffs one needs to model stochastic volatility and interpret vega risk correctly.

In this presentation I discuss a new class of lattice models based on spectral methods and a method for semi-analytic solutions that allows one to find the joint distribution of the structured leg versus the underlying factors in a numerically efficient way, and thus price all payoffs in these class.

WEEK 2: EQUITY AND FX DERIVATIVES

Options on Maxima, Drawdown, Trading Gains and Local Time

8 May ■ PETER CARR *Bloomberg, New york and New York University*

Drawdown is defined as the ex post regret from not selling the asset at the maximum price. In this presentation I discuss the replication problem for calls on drawdown and maxima using barrier options by showing how to infer the joint distribution of the maximum and drawdown.

Semi-static replication using vanillas is also discussed. Finally, I show how to create options on local time

Spectral Methods for Pricing Theory: From the Fundamental Theorem of Finance to the Estimation of Convergence Rates

8 May ■ ALEKSANDAR MIJATOVIC *Imperial College London*

Functional calculus and spectral methods have recently been introduced as a new class of pricing methodologies, borrowing much of the mathematical structure from analytical methods to obtain closed form pricing formulae based on numerical calculations of eigenfunctions.

A number of mathematical problems are open in this area. In this presentation, we address two issues for which progress has been made, namely the problem of demonstrating mathematically nearly optimal convergence rates in the continuum limit and a new proof of the fundamental theorem of finance using functional calculus.

Stochastic Skew Models for Foreign Exchange

9 May ■ ALEKSANDAR MIJATOVIC *Imperial College London*

It is a widely recognised fact that risk-reversals play a central role in the pricing of derivatives in foreign exchange markets.

It is also known that the values of risk-reversals vary stochastically with time. In this talk we will introduce a stochastic volatility model with jumps and local volatility, defined on a continuous time lattice, which provides a way of modelling this kind of risk using numerically stable and relatively efficient algorithms.

Spectral Methods for Volatility Swaps and VIX Options

9 May ■ ALEKSANDAR MIJATOVIC *Imperial College London*
■ HARRY LO *Swiss Re Capital Management and Advisory, London*

The leading pricing methods for volatility contracts are based on the notion of robust hedging. These methods attempt to bypass the need to specify the volatility process and work well for variance swaps.

Volatility swaps and variance swaptions however are more difficult and modelling assumptions become necessary. In this talk we show how to use spectral methods combined with semi-analytic block-diagonalization techniques to obtain the joint distribution between the underlying and its realized variance. This enables one to price all options whose payoff function depends on the realized variance and the terminal level of the underlying.

WEEK 3: COMMODITY DERIVATIVES

Commodity Derivatives: Models and Trading Strategies

16 May ■ HELYETTE GEMAN *Birkbeck College London*

The first part of the presentation discusses price discovery in futures markets, the theory of storage and inventory, convenience yields for storable commodities, the benefits of indexes in commodity markets, the relationship between forward and futures prices and compares the spot and forward freight markets.

The second part compares geometric Brownian motion versus mean-reversion, gives an introduction to seasonality in spot prices, discusses state variable models for energy forward curves, the Gibson-Schwartz (1990) model for oil prices and extensions to a three-state variable model by Geman - Nguyen (2002).

I then review exchange and spread options in commodity markets, Asian options in the oil market, the Geman – Yor model for Asian Options and the use of time-changes for option pricing, trading strategies for the shape of the forward curve through floating-strike Asian Options and properties and limits of Monte Carlo simulations.

Understanding the Fine Structure of Electricity Prices

16 May ■ ANDREA RONCORONI *ESSEC Paris*

This paper analyzes the special features of electricity spot prices derived from the physics of this commodity and from the economics of supply and demand in a market pool. Besides mean-reversion, a property they share with other commodities, power prices exhibit the unique feature of spikes in trajectories.

We introduce a class of discontinuous processes exhibiting a jump-reversion component to properly represent these sharp upward moves shortly followed by drops of similar magnitude.

Our approach allows to capture - for the first time to our knowledge - both the trajectorial and the statistical properties of electricity pool prices. The quality of the fitting is illustrated on a database of major US power markets.

Stochastic Processes and Derivative Valuation in the Natural Gas and Electricity Markets

17 May ■ STATHIS TOMPAIDIS *University of Texas at Austin*

The lecture starts by giving an historical background on regulation vs. deregulation and reviewing the characteristics of the natural gas and electricity markets. I then consider reduced form models, elaborating on advantages and disadvantages, one and two factor models, models with jumps, statistical estimation and calibration.

Regarding derivative valuation, I review numerical techniques focusing in particular on lattice methods and discuss swing options and valuation of storage as an example.

Regarding structural models, I discuss advantages and disadvantages, construction and estimation methodologies. I then discuss derivative design and valuation in the structural framework, including interruptible contracts and ways to account for competition. Conclusions and comparisons end the lecture.

WEEK 4: CREDIT DERIVATIVES

Pricing Credit Default Swaps and Constant Maturity Credit Default Swaps

22 May ■ DAMIANO BRIGO *Banca IMI, Milan*

I firstly review a Black-Cox type structural model with general time varying coefficients and show how to calibrate it exactly to CDS data for different maturities. As a calibration case study I discuss Parmalat prior to default.

Tractable extensions with scenario default barrier are possible and allow one to price risk of fraud as I demonstrate with a calibration exercise with the extended models. I discuss hybrid features induced by counterparty risk and the possible use for equity return swaps and hybrid equity / credit products and give numerical examples. Regarding constant maturity credit default swaps, I discuss pricing with market models.

This involves understanding numeraire changes. I derive a formula for constant maturity CDSs based on the market model, a convexity adjustment interpretation of the formula and provide numerical examples.

Pricing of Bespoke Synthetics: Maths And Myths of Base Correlation

22 May ■ ALICIA VIDLER *Merrill Lynch, London*

Market participants in the synthetic CDO market have converged in recent years on a standard pricing methodology based on the concept of "base correlation skew" to value these very complex instruments.

In this presentation, I review the statements concerning base correlation and separate the mathematically proven ones from the heuristic modelling assumptions. I then discuss the validity of model assumptions by providing a number of examples.

In particular, I discuss difficulties with enforcing no-arbitrage conditions, lack of existence and lack of uniqueness in the calibration methodology, assumptions underlying mapping rules for concentration bespokes, implications of interpolation rules for bespoke tranches. I conclude with a discussion of recovery risk, assumptions on recovery rates and elaborate with examples concerning the ITraxx index and pricing of leveraged super-senior tranches.

Recovery Rate Assumptions and No-Arbitrage in Tranche Markets

22 May ■ MATTHEW LIVESEY *Lehman Brothers, London*

At present, the standardised tranche market is liquidly traded for maturities of 5, 7 and 10 years in both the CDX IG5 and iTraxx S4 indices.

Any consistent pricing model for CDO tranches must be calibrated to the market implied correlation skew. Many models have been suggested for this, fitting the market quotes with varying degrees of success, though none entirely satisfactory.

In this article, we discuss a framework for detecting arbitrage in standard tranche quotes and the extent to which these are consistent with a simplistic deterministic recovery rate assumption.

Dynamic Credit Correlation Models For Bespokes

23 May ■ CLAUDIO ALBANESE *Imperial College London*

A number of credit correlation models alternative to base correlation have so far been proposed by various authors including Duffie and Singleton, Gregory and Laurent, Sidenius, Pieterbarg and Andersen, Tavares, Schonbucher, Gieseke and the speaker himself with co-authors.

These methods are divided into top-down versus bottom-up approaches, and models range from reduced form to structural. The first objective of this presentation is to give a thorough review of these models in light of the recent revival of interest in this subject area.

Next, I discuss correlation modelling for credit barrier models and applications to credit baskets and CDOs. We build high dimensional lattice models correlated by means of conditional independence, whereby the driving factor has an economic cycle interpretation. Since the model is rating-based, management constraints for cash-flow CDOs can possibly be taken into account. Recovery rates are stochastic and the explicit time dependence of model parameters is fairly minimal. Our solution method is based on spectral methods which are very precise especially regarding the calculation of hedge ratios, while numerically noisy Monte Carlo simulations are entirely avoided.

To illustrate the model in two different correlation regimes, we show calibration examples to the January and May 2005 data for CDX tranches, with and without management constraints. In both situations, we find that the market price of correlation risk can be estimated in such a way as to achieve a perfect match to CDO tranche spreads while staying consistent with all single name CDS curves.

Dynamic Credit Correlation Modelling and Historical Estimates

23 May ■ ANTONIO DALESSANDRO *Moody's KMV, London*

Given a rating transition matrix, what is the nearest generator matrix that replicates the historical transitions among credit classes? This problem arises in the credit risk industry, where the evolution of the credit quality of a reference name over time determines its rating migration and hence its objective default probability.

The problem consists in minimizing the error between an assigned transition matrix and the matrix obtained from the solution of the forward equation with a properly assigned generator. For distance measured in infinite norm we determined the solution through a global optimization algorithm in a constrained high-dimensional continuous time lattice.

The aim of the paper is twofold. First, we give basic theoretical results on the structure of the optimal state solution and of the objective function. Second, we describe how global optimization law can be constructed by combining an heuristic approach and functional analysis. The methodology proved to be very efficient and we found precise solutions that can be used for pricing purposes.

A CDO Model With Stochastic Spreads, Outlooks and Economic Cycle Correlation

23 May ■ BRYNJAR ARNARRSON *Kaupthing Bank, London*

I discuss a refinement of credit barrier models where each name is associated to an individual dynamics adjusted to its industry and jurisdiction. Furthermore, the state variable includes not only a fine grained distance to default variable but also a credit outlook (distinguishing between stable, positive and negative outlooks) and an economic cycle variable taking three possible values.

Notwithstanding additional complexities of this model, we show that the high dimensional lattice models by Albanese, Chen, Dalessandro extend and are nearly as efficient. I discuss pricing examples regarding composition bespokes.

WEEK 5: BLACK-LITTERMAN PORTFOLIO OPTIMIZATION

Risk and Asset Allocation

30 & 31 May ■ ATTILIO MEUCCI *Lehman Brothers, New York*

This extended lecture is aimed at presenting the book "Risk and Asset Allocation" which will be distributed to delegates. The book contains a detailed exposition spanning all the steps of one-period allocation from the foundations to the most advanced developments. Multivariate estimation methods are analyzed in depth, including non-parametric, maximum-likelihood under non-normal hypotheses, shrinkage, robust, and very general Bayesian techniques.

Evaluation methods such as stochastic dominance, expected utility, value at risk and coherent measures are thoroughly discussed in a unified setting and applied in a variety of contexts, including prospect theory, total return and benchmark allocation.

Portfolio optimization is presented with emphasis on estimation risk, which is tackled by means of Bayesian, resampling and robust optimization techniques. All the statistical and mathematical tools, such as copulas, location-dispersion ellipsoids, matrix-variate distributions, cone programming, are introduced from the basics. Comprehension is supported by a large number of figures and examples, as well as real trading and asset management case studies.

Risk Measure Changes, Black-Litterman Theory for Non-Normal Returns and Optimization of Reinsurance Portfolios

31 May ■ MARIA SOKOLOVA *ACE Re, London*

Not yet announced

WEEK 6: VOLATILITY TRAINING AND HYBRIDS

Equity Volatility Arbitrage: What It Is And How To Find It

12 June ■ MARCO AVELLANEDA *New York University*

I discuss the use of Weighted Monte Carlo to calibrate correlated multifactor or multi-asset models for equity derivatives and its application to volatility arbitrage. The method involves market-neutral volatility portfolios. I show how to deal with correlations, discuss case studies and give a software demonstration.

Hybrid Derivatives

13 June ■ CLAUDIO ALBANESE *Imperial College London*

Hybrid derivatives are becoming very popular. This lecture reviews pricing methodologies for a number of hybrid classes. The first part of the talk reviews FX-interest rate structures such as Power Reversal Dual Currency callable swaps and FX-linked range accruals and equity-interest rate hybrids such as equity-linked swaptions.

The second part of the talk deals with credit equity hybrids such as convertible bonds, equity default swaps, equity collateralized obligations, credit-linked equity options and credit-interest rate hybrids such as cancellable swaps, CDO subordinated mezzanine swaps and floors, etc. The emphasis is on the use of high-dimensional lattice models with stochastic volatility across asset classes.

■ ORGANISERS

■ PROF. CLAUDIO ALBANESE, Imperial College London
■ DR ALEKSANDAR MIJATOVIC, Imperial College London

■ SENIOR LECTURERS

■ PROF. MARCO AVELLANEDA has worked within Derivative Products and Foreign Exchange at Morgan Stanley and Banque Indosuez respectively. Since 1985 Marco has also held positions at New York University, Courant Institute of Mathematical Sciences, most recently as Director of the Division of Financial Mathematics. Marco has extensive advisory and consulting experience in the fields of volatility trading, relative-value trading, pricing and analysis, arbitrage and the OTC market. An established author in the areas of quantitative modelling of derivative securities and quantitative analysis on financial markets, Marco has also written approximately 90 research papers and is Managing Editor for "International Journal of Theoretical and Applied Finance".

■ DR DAMIANO BRIGO obtained a PhD in stochastic filtering with differential geometry in 1996 from the Free University of Amsterdam, following a BSc in Mathematics from the University of Padua. In 1997 he moved to financial modelling at Banca INTESA in Milan, dealing with the pricing/hedging of equity, basket and interest-rate derivatives and with Risk Measurement. In 1998 he moved to Banca IMI, where he has been appointed as Head of the Credit Models department, after formerly working at the Financial Models department on cross-currency and interest-rate derivatives and smile modelling. Over the years he has published several academic and practitioner-oriented articles in financial modelling, probability and systems theory journals. He is author of the book "Interest Rate Models: Theory and Practice" for Springer-Verlag. He teaches regularly at post-university and Master courses in Milan and for professional training companies in London. He is "Professore a Contratto" at Bocconi University in Milan. He has been included in scientific committees of international conferences at MIT and other academic and professional institutions. His current professional interests include default and credit modelling, counterparty risk, interest-rate and smile modelling and risk measurement.

■ DR PETER CARR is the Head of Quantitative Financial Research at Bloomberg LP, where his group is responsible for all facets of the business operation relating to modelling and analytics. He is also the Director of the Masters in Math Finance programme at NYU's Courant Institute. Prior to his current positions, he headed equity derivative research groups for six years at Bank of America Securities and at Morgan Stanley.

His prior academic positions include 4 years as an adjunct professor at Columbia University and 8 years as a finance professor at Cornell University. Since receiving his PhD in Finance from UCLA in 1989, he has published extensively in both academic and industry-oriented journals. He is currently the treasurer of the Bachelier Finance Society and a practitioner director for the Financial Management Association.
Peter is also an associate editor for 6 academic journals related to mathematical finance and derivatives. He has given numerous talks at both practitioner and academic conferences. He is also credited with numerous contributions to quantitative finance including: co-inventing the variance gamma model, inventing static and semi-static hedging of exotic options, and popularizing variance swaps and corridor variance swaps. Peter has recently won awards from Wilmott Magazine for “Cutting Edge Research" and from Risk Magazine for “Quant of the Year".

■ DR STEFANO GALLUCCIO is currently in charge of the trading of all exotic interest-rate derivatives as well as multicurrency/hybrid derivatives at BNP Paribas in London. He is also in charge of the exotic derivatives structuring team. He started his career at Paribas where he was in charge of credit derivatives modelling, then moved to Commerzbank with a senior role in credit derivatives research. He then moved to BNP Paribas with the role of deputy head of IR and hybrid quantitative research in London and finally moved to trading and structuring in 2002. In 2004 his team was awarded the "Best IR-Exotic House of the Year" prize by Euromoney. Stefano holds a PhD in Mathematical Physics from the Ecole Polytechnique Lausanne and the University of Fribourg in Switzerland, and he is author of several academic papers in mathematical physics and finance.

■ DR MATTHEW LIVESEY is an Associate in the Quantitative Credit Research Group at Lehman Brothers in London, which he joined in 2004. His main area of research is modelling credit derivatives, in particular the pricing and risk management of correlation products such as synthetic CDO tranches and CDO-Squareds. Matthew has a degree in Mathematics from Oxford and a PhD in Quantitative Finance from Imperial College.

■ PROF. HELYETTE GEMAN is Professor of Mathematical Finance at Birkbeck College London. She is a graduate of Ecole Normale Superieure in mathematics, holds a Masters degree in theoretical physics and a PhD in mathematics from the University Pierre et Marie Curie and a PhD in Finance from the University Pantheon Sorbonne. Professor Geman has been a scientific advisor to a number of major energy companies for the last decade, covering the spectrum of oil, natural gas and electricity as well as agricultural commodities origination and trading. She was previously the head of Research and Development at Caisse des Depots. She has published more than 60 papers in major finance journals including the Journal of Finance, Mathematical Finance, Journal of Financial Economics, Journal of Banking and Finance and Journal of Business. She has also written a book entitled Insurance and Weather Derivatives and is a Member of Honor of the French Society of Actuaries. Professor Geman's research includes asset price modelling using jump-diffusions and Lévy processes, commodity forward curve modelling and exotic option pricing for which she won the first prize of the Merrill Lynch Awards. She was named in 2004 in the Hall of Fame of Energy Risk.

■ DR PATRICK HAGAN received his PhD and BSc in Applied Mathematics from the California Institute of Technology. He has worked at Bear-Stearns, Nomura, NumeriX, BNP Paribas, Morgan Stanley and Bloomberg designing trading systems for fixed income, credit, and foreign exchange derivatives, as well as developing component models, calibration methods, and numerical algorithms. He now heads quantitative research at Brevan Howard Asset Management. Before entering finance he worked at CNLS and in the Computer Research and Applications group at Los Alamos, and at Exxon Science Laboratories. Patrick has taught at the California Institute of Technology, at the Institute for Mathematics and its Applications, and at Stanford University.

■ DR ATTILIO MEUCCI holds a BA summa cum laude in Physics and a PhD in Mathematics from the University of Milan, an MA in Economics from Bocconi University in Milan, and is CFA chartholder. Attilio Meucci is a vice president at Lehman Brothers, Inc., New York, in the fixed-income research division. Previously, he was a trader at Relative Value International, a hedge fund in Greenwich, CT that trades in equities and fixed-income securities worldwide. Previously, he was a consultant in the Milan office of Bain & Co., where he designed tools of personal financial planning, credit and market-risk management, portfolio insurance, tactical and strategic asset allocation. Attilio Meucci is the author of several publications in mathematics and finance and has taught graduate courses on Asset Allocation and Risk Management worldwide.

■ PROF. ANDREA RONCORONI is Adjoint Professor of Finance at ESSEC Graduate Business School and Lecturer at University Paris Dauphine, Bocconi University and the Italian Stock Exchange. He holds a PhD in Applied Mathematics and a PhD in Finance. His research interests focus on risk management and quantitative modelling in energy markets. He is consultant for financial and energy companies, such as Gaz de France and IMI Group.

■ PROF. STATHIS TOMPAIDIS is an Associate Professor at the Department of Information, Risk and Operations Management at the McCombs School of Business at the University of Texas at Austin. He has a PhD in Physics from the University of Texas at Austin, and has also held academic positions at Universities in Canada, France and Mexico. His research interests, include, among others, Computational Finance, Energy Finance, and Real Options. Some of his papers have appeared in the Journal of Finance, Management Science, and Operations Research. He also has experience directing collaborative research projects between Universities, Financial Institutions, and Utility companies.

■ JUNIOR LECTURERS

■ BRYNJAR ARNARRSON, Kaupthing Bank, London
■ ANTONIO DALESSANDRO, Moody's-KMV, London
■ HARRY LO, Swiss Re Capital Management and Advisory, London
■ MARIA SOKOLOVA, ACE Re, London
■ MANLIO TROVATO, Merrill Lynch, London
■ ALICIA VIDLER, Merrill Lynch, London

REGISTRATION FORM

SUMMER SCHOOL ON FINANCIAL DERIVATIVES

MAY - JUNE 2006

Delegate's Details:

Title:	First Name(s):
Surname:	
Job Title:	
Organisation:	
Address:	
Postcode:	Email:
Tel:	Fax:

COURSE FEES: (VAT Exempt)

☐ **Week 1: 2 & 3 May £1200**	☐ **Week 5: 30 & 31 May £1200**
☐ **Week 2: 8 & 9 May £1200**	☐ **Week 6: 12 & 13 June £1200**
☐ **Week 3: 16 & 17 May £1200**	☐ **Season Ticket £5000**
☐ **Week 4: 22 & 23 May £1200**	

METHODS OF PAYMENT: **Overseas delegates should either pay by STERLING BANK DRAFT drawn on a UK bank, or add £25 to cover bank charges**

☐ **CHEQUE:** I enclose the fee of: £

* Please make draft/cheques payable to "**IMPERIAL COLLEGE LONDON**" *

☐ **CREDIT CARD:** Please charge the following credit card for the total fee of: £ _____

Type of card: ☐ Visa ☐ Mastercard ☐ Switch ☐ Delta

(these cards ONLY) Issue No (Switch Only): _____

Card No:	Expiry date:
Card in the name of:	Signed:

❑ **INVOICE:** Please invoice the following person/organisation for the sum of £ _____

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OTHER INFORMATION: Please delete where appropriate

✧ I heard of this course from;

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✧ I will / will not require special meals (e.g. Vegetarian). Please give details;

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✧ I will / will not need special facilities for a disability. Please give details;

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For accommodation booking, please contact Imperial College Conference Office on Tel: +44 (0)20 7594 9507/11 Fax: +44 (0)20 7594 9504/5

I agree that if payment is not received from the above organisation, I will be personally liable for the full fee.

Applicant's Signature:

Please send completed form (or original if faxed) to:
Bang Nong, Centre for Professional Development,
Imperial College London,
Rm 318 Sherfield Building, Exhibition Road, London SW7 2AZ, UK.
Tel: +44 (0)20 7594 6882; Fax: +44 (0)20 7594 6883;
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GENERAL INFORMATION

REGISTRATION

Booking in the first instance can be made by

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and then by completing and returning the attached registration form to the address shown. Detailed joining instructions, including a map, will be sent to all participants 10-14 days prior to the commencement of each course. Places on the course are limited, EARLY BOOKING IS ADVISED.

FEES

The fee is £1200 for each 2-Day workshop and £5000 season ticket for all workshops.

Season tickets are transferable and can be shared by several delegates attending different sections. The fee covers tuition, a comprehensive set of course notes, lunches, and light refreshments, but does not cover accommodation. Please note all fees must be received before the course start date.

TEAM ATTENDANCE

A 20% discount on the course fee is available for the third and any subsequent applicants from the same organisation who enrol together for the same duration.

VENUE

Imperial College London, South Kensington Campus. Imperial College London is located in a pleasant part of London, close to Hyde Park, the Royal Albert Hall and world-renowned museums.

ACCOMMODATION

Single bedroom accommodation is available in local hotels within easy access to the College. Minimum cost of a room with shower/bath will be in the region of £85 per night. This is additional to the course fee, and participants are responsible for payment of their hotel bills. For further details and reservations, please contact:

Hotel Booking Service,
Imperial College Conference Office,
Watt's Way, Prince's Gardens, London SW7 1LU.
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Information is available at: **www.imperial.ac.uk/conferences**

CANCELLATIONS

A 10% administration fee will be levied for cancellations made up to two weeks prior to the start of the course. Cancellations thereafter will be liable to the loss of the full fee. Notice of cancellation must be given in writing by letter or fax and action will be taken to recover, from the delegates or their employers, that proportion of the fee owing at the time of cancellation.

The College reserves the right to cancel an advertised course at short notice. It will endeavour to provide participants with as much notice as possible, but will not accept liability for costs incurred by participants or their organisations for the cancelation of travel arrangements and/or accommodation reservations as a result of the course being cancelled or postponed. If a course is cancelled, fees will be refunded in full. The College also reserves the right to postpone or make such alterations to the content of a course as may be necessary.

QUERIES

Further information regarding the technical content of the course should be directed to:
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