



Optimal Hedge Monte-Carlo:
Applications to Equity Derivatives &
Volatility Trading
by Jean-Philippe Bouchaud & Vivek Kapoor

London: 14th & 15th March 2011

This workshop provides TWO booking options

Register to ANY ONE day of the workshop

Register to BOTH days of the workshop and receive £200 discount

Early Bird Discount: 10% Before 31st December 2010

Introduction

This course introduces a new way to hedge, value, & risk-manage equity options in the real-world. By directly establishing optimal hedging strategies under realistic conditions, Optimal Hedge Monte-Carlo (OHMC) provides a natural integration between trading strategy imperatives and risk-management needs. By discarding the perfect hedge assumption of the traditional risk-neutral approach, and thoroughly quantifying residual risks of attempted replication, OHMC provides an ability to measure risk-premiums and establish linkages between seemingly disparate fields of behavioral finance, econometrics and hedging argument based option analysis.

- **This course will provide a comprehensive introduction to OHMC methodology and its practical applications to vanilla and exotic options & volatility trading.**
- **An interpretation of market prices of options based on real world characteristics of equity underlying will be provided in this course.**
- **Realistic descriptions of tail-risks and asymmetries in trading-hedging options and risk-return metrics will be developed and brought to bear on design of trading strategies.**
- **The course material will be of interest to traders, quantitative analysts, and risk-managers.**

Presenters:

Dr. Jean-Philippe Bouchaud, Head of Research, Capital Fund Management

Jean-Phillippe Bouchaud became interested in theoretical finance in 1991. He founded the company Science & Finance in 1994 with J.-P. Aguilar, that merged with Capital Fund Management (CFM) in 2000. He now oversees, with Marc Potters, the research team of CFM (35 PhDs) and teaches statistical mechanics and finance at Ecole Polytechnique. He wrote the book Theory of Financial Risk and Derivative Pricing.

Dr. Vivek Kapoor, Multi-Asset & Hybrids Trader, Citi

Vivek Kapoor is responsible for creating systematic investment & hedging strategies spanning multiple asset classes. These strategies include trading directional exposures within a dynamic portfolio allocation approach, and equity & credit volatility & correlation risk-premiums. Vivek has worked in capital markets trading & risk management roles since 2000. He received his PhD from MIT for research on dispersion & uncertainty of transport phenomena in random porous media.

Day 1: Optimal Hedge Monte-Carlo: Applications to Equity Derivatives & Volatility

Welcome to a Non-Black-Scholes World

- Role of residual risk in option markets
- Introduction to the OHMC approach
- Beyond volatility smile/skew

Direct Hedge Analysis of Options

- Option trader-hedger's P&L
- Static hedging and residual risk
- Dynamic hedging & OHMC algorithm

Models of Equity Underlying-I

- Empirical features
- GARCH
- General Auto-Regressive Asset Model

Advanced OHMC Features

- Transaction-Costs
- Risk-Premium constraint
- Conditioning on realized volatility

Day schedule:	09:00 – 17:00
Break:	10:30 – 10:45
Lunch:	12:30 – 13:30
Break:	15:15 – 15:30

Day 2: Optimal Hedge Monte-Carlo: Applications to Equity Derivatives & Volatility

Models of Equity Underlying – II

- Empirical features
- Multi-timescale statistical feedback model for volatility fluctuations
- Recent advances in multi-asset models

Exotic Options

- General OHMC formulation
- Forward volatility exposure: Cliquets
- Multi-asset options

Residual-Risks of Hedged Vanilla Options

- Asymmetry and tail-risks
- Term & strike dependence
- Volatility regime dependence
- Risk-capital of option trader-hedger

Volatility Trading

- Inference of risk-premium
- Historical behavior of short & long volatility positions
- Hedging frequency
- Volatility control

Day schedule:	09:00 – 17:00
Break:	10:30 – 10:45
Lunch:	12:30 – 13:30
Break:	15:15 – 15:30

Workshop Fee:

- Any One day: £1099 + UK VAT
- Both days: £1998 + UK VAT
(Including £200 Discount)
- Early Bird Discount: 10% Before 31st December 2010
- 70% Academic Discount (FULL-TIME students only.)

Delegate details:

Company:	
Name:	
Position:	
Name:	
Position:	
Name:	
Position:	
Department:	
Address:	
Country:	
Phone:	
E mail:	
Date:	
Signature:	

To register please fax the completed booking form to:

Fax: +44 (0) 1273 201360

Flight details:

All delegates flying into London on the morning of the event are reminded that they should arrive 30 minutes before the workshop starts for registration. The hotels West End location is approximately 1 hour from all 3 main London airports, Heathrow, Gatwick and City. Returning flights should equally allow for the events finishing time.

Sponsorship:

World Business strategies Ltd, offer sponsorship opportunities for all events, E-mail headers and the web site.
Contact Sponsorship: +44 (0) 1273 201352

Disclaimer:

World business strategies command the rights to cancel or alter any part of this programme.

Cancellation:

By completing of this form the client hereby enters into a agreement stating that if a cancellation is made by fax or writing within two weeks of the event date no refund shall be given. However in certain circumstances a credit note maybe issued for future events.

Prior to the two week deadline, cancellations are subject to a fee of 25% of the overall course cost.

Discount Structure:

The discount is available on any day permutation, and can be combined across delegates within the same company (only at the time of booking and not retrospectively).

Registration:

Tel: +44 (0) 1273 201352
Fax: +44 (0) 1273 201360

Contact:

<http://www.wbstraining.com>
sales@wbstraining.com