Financial Mathematics: Risk Management, Modeling and Numerical Methods

Wednesday January 3, 2001

8:30–9:00	*Registration*
9:00–9:15	**Eitan Tadmor** (UCLA / University of Maryland) *Introduction*
9:15–9:30	**Roberto Peccei** (UCLA) *Welcome*
9:30–10:45	**René Carmona** (Princeton University) *The Mechanics of Fixed Income Securities: A Crash Course*
10:45–11:15	*Break*
11:15–12:15	**René Carmona** (Princeton University) *Statistics of Interest Rate Data*
12:15–2:15	*Lunch (on your own)*
2:15–3:30	**Albert Shiryaev** (Steklov Mathematical Institute) *Essentials of Stochastic Finance I*
3:30–4:00	*Break*
4:00–5:15	**Albert Shiryaev** (Steklov Mathematical Institute) *Essentials of Stochastic Finance II*
5:15–5:30	*Break*
5:30–12:00	*Wine/Cheese Reception (Hosted by IPAM)*

Thursday January 4, 2001

9:00–10:15	**René Carmona** (Princeton University) *Stochastic Models for Short Rate*
10:15–10:45	*Break*

(Thursday schedule continued on next page)

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10:45–12:00 **René Carmona** (Princeton University)
A First Look at the HJM Models

12:00–2:00
TBA

2:00–3:15 **Albert Shiryaev** (Steklov Mathematical Institute)
Essentials of Stochastic Finance III

3:15–3:45 *Break*

3:45–5:00 **Albert Shiryaev** (Steklov Mathematical Institute)
Essentials of Stochastic Finance IV

Friday January 5, 2001

9:00–10:15 **René Carmona** (Princeton University)
Inifinite Dimensional Stochastic Analysis

10:15–10:45 *Break*

10:45–12:00 **René Carmona** (Princeton University)
Generalized HJM Models

12:00–2:00 *Lunch (on your own)*

2:00–3:15 **Albert Shiryaev** (Steklov Mathematical Institute)
Essentials of Stochastic Finance V

3:15–3:45 *Break*

3:45–5:00 **Albert Shiryaev** (Steklov Mathematical Institute)
Essentials of Stochastic Finance VI

Monday January 8, 2001

8:30–9:00 *Registration*

9:00–9:15 **Eitan Tadmor** (UCLA / University of Maryland)
Introduction

9:15–10:00 **Paul Embrechts** (ETH, Zurich)
Fine Tuning Integrated Risk Management Methodology

10:00–10:30 *Break*

(Monday schedule continued on next page)

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10:30–11:15 **Mark Broadie** (Columbia University)
Low Discrepancy Lattices for Pricing Multidimensional American Options

11:15–12:00 **Jaksa Cvitanic** (University of Southern California)
Utility Maximization with Random Endowment or Transaction Costs

12:00–2:00 *Lunch (on your own)*

2:00–3:00 **Jerome Detemple** (Boston U)
A Monte-Carlo Method for Optimal Portfolios

3:00–3:45 **Paul Glasserman** (Columbia University)
The Term Structure of Simple Forward Rates with Jump Risk

3:45–4:15 *Break*

4:15–5:00 **Art Owen** (Stanford University)
Numerical Methods for Portfolios and American Options

5:00–12:00 *Dinner (Hosted by IPAM)*

Tuesday January 9, 2001

9:00–9:45 **Benoit Mandelbrot** (Yale University)
Extreme Changes in Financial Prices: The Multifractal Model

9:45–10:15 *Break*

10:15–11:15 **Steven Shreve** (Carnegie Mellon University)
A Unifying Model for Credit Derivatives

11:15–12:00 **Eduardo Schwartz** (UCLA)
Valuing American Options By Simulation: A Simple Least-Squares Approach

12:00–2:00 *Lunch (on your own)*

2:00–3:00 **John Moody** (Oregon Graduate Institute)
Minimizing Downside Risk via Reinforcement Learning

3:00–3:45 **René Carmona** (Princeton University)
Particle Filtering and Applications in Finance

3:45–4:15 *Break*

4:15–5:00 **Michael Brennan** (UCLA)
Dynamic Asset Allocation under Inflation

Wednesday January 10, 2001

9:00–9:45	**Ronald Dembo** (Algorithmics) *The Measurement and Management of Enterprise Risk*
9:45–10:15	*Break*
10:15–11:15	**Marek Musiela** (Paribas, London) *Pricing of Derivatives Written on Non-Traded Assets*
11:15–12:00	**Thaleia Zariphopoulou** (University of Texas) *Valuation of Unhedgeable Risk*
12:00–2:00	*Lunch (on your own)*
2:00–3:00	**Albert Shiryaev** (Steklov Mathematical Institute) *A New Modification of the Russian Option: Considerations Under a Possibility of a Default*
3:00–4:00	**Steven Kou** (Columbia University) *Option Pricing Under a Double Exponential Jump Diffusion Model*
4:00–12:00	*Shuttle bus to Santa Monica Pier will return at 9pm*

Thursday January 11, 2001

9:00–9:45	**Ronald Lagnado** (MKI Rish) *Estimating Credit Exposure and Economic Capital with Monte Carlo Simulation*
9:45–10:15	*Break*
10:15–11:15	**David Heath** (Carnegie Mellon University) *Risk Management Using Coherent Measures of Risk*
11:15–12:00	**Eric Reiner** (UBS) *Convolution Methods for Path-Dependent Options*
12:00–2:00	*Lunch (on your own)*
2:00–3:00	**Ioannis Karatzas** (Columbia University) *Consumption/Portfolio Optimization with Habit-Formation*
3:00–3:45	**George Papanicolaou** (Stanford University) *Portfolio Optimization and Stochastic Volatility*
3:45–4:15	*Break*
4:15–5:00	**Darrell Duffie** (Stanford University) *Valuation in Dynamic Bargaining Markets*

Friday January 12, 2001

9:00–9:45	**Lixin Wu** (UST) *Optimal Calibration of LIBOR Market Model*
9:45–10:15	*Break*
10:15–11:15	**Stanley Pliska** (University of Chicago) *Risk Sensitive Asset Management: Some New Results*
11:15–12:00	**Peter Carr** (Bank of America) *Options, Liquidity and Volume*