

CARISMA SPRING NEWSLETTER



CENTRE FOR THE ANALYSIS OF RISK AND OPTIMISATION MODELLING APPLICATIONS

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New CARISMA website launched

www.carisma.brunel.ac.uk

Dear Friends

After a severe winter with the chill of the subprime crisis, we look to the more cheerful spring and summer months.

CARISMA faculty and PhD students are involved in many activities which are keeping us creatively engaged and stretched. We lead with the makeover of our logo and our new website.

Our 4th annual conference is generating considerable interest. We are also actively engaged in NATCOR training as well as a PG diploma in India.

We are participating in APMOD 2008 in Bratislava as well as other events in the



UK and USA. Our partnerships have led to new projects with Daimler AG, NAG, Ravenpack, ACE and Lloyds Insurers. We have new visitors to our research group.

So please read on and explore.

Gautam Mitra

Director of CARISMA

Congratulations!

Our Visiting Professor, Dilip Madan Named "Quant of the Year"

Visiting professor to CARISMA Dilip Madan has been named "Quant of the Year" by *Risk*, a leading financial risk management magazine. *Risk* readers and contributors, which include quantitative analysts and financial engineers, voted for Madan to receive the honor.

Madan was felicitated "Quant of the Year 2008" 30th January at the *Risk* Awards 2008 in London. He was selected for his overall contributions to modern quantitative finance and in particular a groundbreaking technical paper published in *Risk*, September 2007,

"Calibrating and Pricing With Embedded Local Volatility Models," which described a model that is now implemented across Morgan Stanley's trading desks.

Forthcoming Workshops

- Robust Portfolio Optimisation
- LDI/ALM Workshop
- New Performance Measures and Structured Products Valuation
- News Analytics and Financial Modelling

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4th CARISMA Annual Conference

RISK CONTROL STRATEGIES FOR HEDGE FUNDS AND PROGRAM TRADING

This is the 4th annual conference organised by CARISMA (The Centre for the Analysis of Risk and Optimisation Modelling Applications) ; it will be hosted by 7City Learning, London.

You can download the Call for Participation and the current draft programme at <http://www.optirisk-systems.com/carisma2008>

This conference is unique as it brings together research knowledge in the fields of Hedge Funds and Program Trading. The conference provides an opportunity for practitioners and academics working at the forefront of financial planning, optimisation and risk modelling to discuss problems and challenges, and to suggest fruitful directions for future research which focus on the emerging requirements of the finance industry. The fee for participation is deliberately kept modest so as to encourage attendance from a wide range of professionals and researchers.

The previous three events have been very well received and we expect this year's conference to be even better! We hope that you and your colleagues will join the lively and informed audience of Hedge Fund Quants, Quantitative Analysts and Traders, Algorithmic Trading Developers, Portfolio Managers, Risk Managers, Academics and other investment professionals at our 2008 event.

Pre & Post Conference WORKSHOPS

30 June 2008: Two Half-Day WORKSHOPS:

Morning Workshop: **Robust Portfolio Optimisation**

Presenters: Adrian Zymolka, Axioma; Dan Bienstock, Columbia; CARISMA Team

Afternoon Workshop: **LDI/ALM Workshop**

Presenters: Gerd Infanger, Stanford University & CEO of Infanger Investment Technology, LLC; Michael Dempster, Centre for Financial Research, Judge Business School, Univ. of Cambridge & Cambridge Systems Assoc. Ltd; CARISMA Team

3 July 2008: Two Half-Day WORKSHOPS:

Morning Workshop: **Risk Control & Acceptability Measures**

Presenters: Dilip Madan, University of Maryland, Consultant to Morgan Stanley & Visiting Professor, CARISMA (and Risk Awards "Quant of the Year 2008") & Carlo Acerbi, Abaxbank

Afternoon Workshop: RavenPack workshop: **Quantitative models of news sentiments**

Presenter: Philip Gagner, RavenPack

MAIN CONFERENCE:

1-2 July 2008: **RISK CONTROL STRATEGIES FOR HEDGE FUNDS AND PROGRAM TRADING**

Day One – 1 July 2008: Investment Strategies for Hedge Funds

Day Two – 2 July 2008: Risk Control for Program Trading

MSc Programme:

CARISMA (on behalf of Brunel University) in partnership with Jadavpar University is launching an MSc course in India: **MSc in Risk Management and Financial Engineering**. This is supported by the UKIERI programme of the British Council.

Course Directors are: Dr. Cormac Lucas in the UK and Professor Samar Bhattacharya in India.



NATCOR Course: Convex Optimization

The main aims of this course are to develop knowledge of different theoretical aspects of convex optimization and to develop practical skills in applying optimization technology in the real world. For doctoral students who are working on the theoretical issues in optimization, it provides a solid foundation upon which advanced theoretical problems can be addressed in their further research. For students

whose research focus is developing complex optimization models for real life problems, the course offers plenty of hands-on modelling experience with an industry strength solver. The course will enable all students to gain deeper and broader insights into the exciting world of optimization. It promises to be a challenging, stimulating and enjoyable week for all.

NATCOR will offer the following courses during 2007-9:

- [Heuristics and Approximation Algorithms](#)
University of Nottingham, 31st March - 4th April 2008
- [Convex Optimization](#)
Brunel University, 16th - 20th June 2008
- [Combinatorial Optimization](#)
University of Southampton, 15th - 19th September 2008
- [Stochastic Modelling](#)
Lancaster University, 23rd - 27th March 2009
- [Simulation](#)
University of Warwick, 29th June - 3rd July 2009

OTHER EVENTS WHERE CARISMA TEAM WILL BE PRESENTING

- **ALGORITHMIC TRADING 2008**, 7 APRIL 2008
- **INFORMS PRACTICE CONFERENCE**, 13—15 APRIL 2008
- **IFORS 2008**, 13—18 JULY 2008
- **BACHELIER 5TH WORLD CONGRESS**, 15—19 JULY 2008
- **OR 50, YORK**, 9—11 SEPTEMBER 2008
- **INFORMS ANNUAL MEETING 2008**, 12—15 OCTOBER 2008

APMOD 2008

APMOD Conference Series

APMOD (APplied mathematical programming and MODelling) is a series of conferences, which started 1991 due to an initiative of Gautam Mitra at Brunel University/West London. It was followed by Budapest (1993), Brunel (1995), Limassol/Cyprus (1998), Brunel (2000), Varenna/Italy (2002), Brunel (2004), Madrid (2006).

The 2008 conference is being organized by the University of Vienna, the venue will be Comenius University, Bratislava.

Scope

The conference is focused on theory and applications of operational research in general and mathematical programming in particular. The research and developments discussed will cover solution algorithms and modelling applications. Algorithms cover linear, integer, quadratic, convex, stochastic and combinatorial optimization. The modelling applications are taken from a variety of areas: finance, insurance, energy, transportation and communication, health, supply chain and the utility sector among them. In addition to these areas, contributions on

more general topics in operational research are welcome.

Venue

Bratislava (population 0.5 million) is 60 km distance from Vienna (population 1.8 million). The Vienna airport lies between the two cities (20 km from Vienna, 40 km from Bratislava). Bratislava and Vienna are called the twin cities (Wienislava). There are 90 trains per day connecting the two capitals (travel time less than 1 hour).

DATES: 28—31 MAY, 2008

IWOR, www.deio.urjc.es/~iwor/
International Workshop on Operational Research, (In honour of Laureano Escudero) Madrid, 5—7 June
 Laureano F. Escudero, 23/9/1942, PhD in Economic Sciences has been full professor of Statistics and Operations Research at the Universidad Miguel Hernández, Elche (Alicante, Spain) and member of its Operations Research Center. Currently he is full professor at the Dept. of Statistics and Operations Research, Universidad Rey Juan Carlos de Madrid.
 Professor Escudero is a leading figure in several Operations Research fields, having made seminal contributions in combinatorial and integer programming, decision support models and stochastic programming.

Plenary speakers:
 * Martin Grötschel, (ZIB), Germany
 * Monique Guignard, Wharton School, USA
 * Gautam Mitra, CARISMA, Brunel University, UK
 * Rüdiger Schultz, University of Duisburg-Essen, Germany
 * Maarten van der Vlerk, University of Groningen, Netherlands








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Sponsors

New Projects

In this quarter , we will be embarking upon following projects

	<ul style="list-style-type: none"> • Dominik Hollman will work on <i>Uncertainty based planning models for flexible networks.</i>
	<ul style="list-style-type: none"> • Leela Mitra and Xiaochen Sun will work on <i>Quantification of news and its impact on asset pricing.</i>
	<ul style="list-style-type: none"> • A team drawn from CARISMA & OptiRisk together with NAG software specialists is <i>rewriting the FortMP solver in Fortran2000.</i> CARISMA is also acting as the beta site for the release of NAG library: callable from MATLAB through the mex file feature.

Our relationship with Smith Institute has led to the following internship projects for PhD students

	<ul style="list-style-type: none"> • Katharina Schwaiger will work on <i>Simulation models for extreme loss events and pricing of property and casualty insurance.</i>
	<ul style="list-style-type: none"> • Nilgun Canakgoz will work on <i>Application of portfolio optimization theory for the choice of insurance projects</i>

People

Staff:

- **Diana Roman** has been appointed to a permanent lecturer position in CARISMA.
- **Pierre Hansen** is going to visit CARISMA during the summer for 6 months. (sabbatical)
- **Csaba Fabian** is going to visit us multiple times in the next 6 months

Students:

We are pleased to welcome two new PhD students sponsored by the government of Malaysia

Miss Aida Benjamin will be working with Professor Beasley in the area of vehicle routing

And

Miss Siti Sheikh Hussin will be working with Professor Mitra in the area of ALM applied to pension