EUROPEAN SCIENCE FOUNDATION

AMaMef

Advanced Mathematical Methods for Finance

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A.Ma.Me.F

2005- 2010

About A.Ma.Me.F.

- A.Ma.Me.F. is a *European Science Foundation* (ESF) scientific programme within *Physical and Engineering Sciences* (PESC).
- The programme started in 2005 with the active participation of 13 countries: *Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Switzerland, Turkey, United Kingdom*
- Other countries have joined the program: first *Sweden* (2006) and *Romania* (2007).
- The programme is ready to welcome other countries.

Steering committee (2007)

Chair:

Bernt Øksendal (Norway)

Co-chair:

Giulia Di Nunno (Norway)

Programme coordinator:

Roberto Natalini (Italy)

Head of the Advisory Board:

Lane Hughston (UK)

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Turkey:	**Hayri Korezlioglu**
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Goals of A.Ma.Me.F.

- Development and application of advanced mathematical tools in finance
- Creation and reinforcement of relationships among European research teams
- Cultivation and maintenance of strong and mutually reinforcing links with the financial industry
- Interdisciplinary interactions

Research Areas

- **Mathematical foundations of financial analysis:** stochastic analysis and calculus, stochastic control and differential equations
- **Numerical methods in finance:** numerical methods for pricing and hedging, stopping time problems, market calibration analysis, efficient computation of parameter sensitivities
- **Applications to financial modelling:** default/credit risk, modelling asymmetric information, optimal portfolio management, risk-sensitive optimal control, public debt management

Activities

- **Workshops** and **Conferences** to provide interaction and exchange of knowledge. Organized directly within the programme A.Ma.Me.F.
- **Promotion** (co-funding) of relevant scientific activities related to the programme
- **Training** of young researchers with the organization of schools
- **Grants**: short term visits (no more than 15 days), exchange grants (up to 6 months)

First year of activities

- **A.Ma.Me.F Workshops:**
  - *Stochastic Analysis and Computational Finance*, Imperial College, London, November 10-12, 2005.
  - *Numerical Methods in Finance*, INRIA, Paris, February 1-3, 2006.
- **Co-funded Activities:**
  - *Mathematical Methods in Risk Theory*, workshop in honour of H. Buhlmann, University of Florence, October 6-8, 2005.
  - *Winter school on Financial Mathematics,* Lunteren, The Netherlands, January 23-25, 2006.
  - *School and Symposium on Optimal Stopping with Applications,* Manchester, January 17-21 and 22-27, 2006.
- **AMaMeF General Conference**. Antalya, April 25-29, 2006

Second year of activities

- **A.Ma.Me.F. Workshops**:
  - *Risk measure*, Evry, France, July 6-7, 2006
  - *Information in pricing models*, Toulouse, France, January 25-27, 2007
- **Co-funded Activities:**
  - *Multivariate modeling in finance and risk management*, Sandberg Manor, Denmark, June 16-19, 2006
  - *Financial modeling with jump processes*, Palaiseau, France, September 6-8, 2006
  - *Winter school on Financial Mathematics,* Lunteren, The Netherlands, January 23-25, 2007.
- **Second AMaMeF General Conference: "*Advances in mathematical finance*"**. Bedlewo, April 30 - May 5, 2007

Activities to come in the Third year

- **A.Ma.Me.F. Workshops**:
  - *Innovations in mathematical finance*, Loen, Norway, June 25 - July 1, 2007
  - *Conference on finance and PDEs*, Stockholm, Sweden, August 20-23, 2007
- **Mid-term conference** on *Advanced Mathematical Methods in Finance*, Vienna, Austria, September 17-23, 2007
- **Co-funded Activities**:
  - *Conference and Summer School on Levy processes*. Copenhagen, Denmark, August 13-17, 2007
  - *Winter school on Financial Mathematics,* Lunteren, The Netherlands, January 21-23, 2008.
  - *Interplay between finance and insurance*, Brussels, Belgium, February 7-8, 2008

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www.iac.rm.cnr.it/amamef

and

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