

Workshop in Memory of Professor Hayri Körezlioğlu

# Recent Developments in Financial Mathematics and Stochastic Calculus

GERHARD-WILHELM WEBER, ANKARA

On June 26, 2007, our dear teacher and friend Prof. Dr. Hayri Körezlioğlu passed away at the age of 77. Professor Körezlioğlu was the founder and chair of the Department of Financial Mathematics at the Institute of Applied Mathematics (IAM) of the Middle East Technical University (METU). The institute was established in 2002 (<http://www3.iam.metu.edu.tr/>). That he is no longer among us means a great loss for everyone at IAM.

IAM is organizing a special workshop in memory of Professor Hayri Körezlioğlu. It would like to share moments of science and friendship in his honour, in areas of applied mathematics which Professor Körezlioğlu worked in as a researcher, educator and as a pioneer in Turkey. The workshop will follow a series of seminars for practitioners from the financial sector, mainly, from Turkey, and for our students. Its program aims to represent various subjects constituting the title of the event. Talks will focus on the progress made in Financial Mathematics for modeling financial phenomena and developing numerical techniques for applications. An additional emphasis will be made on the theoretical foundations in Stochastic Calculus. Concerning applications, a major problem is model identification based on observations. In many countries, particularly in developing economies, statistical data are insufficient. This creates both decision making problems under uncertainty and model risks.

The scientific goals of the workshop consist in sharing and discussing recent excellent research achievements, in preparing future projects on modern challenges in science and development of the financial sector, and is an invitation to the youth into this dynamics, with a special emphasis on guiding it. The workshop program will consist of tutorials, invited and contributed papers.

## Topics

We encourage those interested in the following topics to overview the trends or present their recent achievement in themes such as

- option pricing,
- hedging of claims,
- interest rate models,
- market risk,
- credit risk and credit rating,
- computational statistics and statistical learning for model identification,
- inverse problems in finance,
- modeling and solution of random phenomena as Brownian motions,
- Levy processes in modeling financial instruments,
- functional central limit theorems for semimartingales,
- modelling asymmetric or imperfect dynamical information,
- rare events and risk management,
- optimal portfolio management,
- stochastic control and differential equations,
- dependence issue in finance,
- stopping time problems,
- large-scale optimization techniques in finance,
- numerical methods in finance,
- software development,
- applications of theory and methods to the financial sector of Turkey,
- theoretical advances in stochastic processes and time-series models.

## Invited Speakers

(further ones will follow):

- Erhan Bayraktar (University of Michigan, Ann Arbor, USA),
- Ulug Capar (Sabanci University, Istanbul, Turkey),
- Ralf Korn (University of Kaiserslautern, Germany),
- Wolfgang J. Runggaldier (Universita degli Studi di Padova, Italy),
- Deniz Sezer (York University, Canada),
- Halil Mete Soner (Sabanci University, Istanbul, Turkey),
- Süleyman Üstünel (Ecole Nationale Supérieure des Télécommunications, Paris, France).

**Workshop in Memory of Professor Hayri Körezlioğlu:**  
**"Recent Developments in Financial Mathematics and Stochastic Calculus"**  
 Ankara, April 25-26, 2008  
<https://kolmogorov.iam.metu.edu.tr/korezlioglu>

$$\frac{S\phi(d_1)\sigma}{2\sqrt{T}} - rKe^{-rT}\Phi(d_2)$$

Institute of Applied Mathematics  
 METU, Ankara, Turkey

*Important Dates*

Abstract submissions:	January 15, 2008
Notification of acceptance:	February 1, 2008
Early registration:	February 20, 2008
Pre-Workshop Seminar Series:	April 23-24, 2008
Workshop:	April 25-26, 2008

Abstract Submission, Registration, Contact, Detailed Information: Please visit <http://korezlioglu.iam.metu.edu.tr> .

*Program Committee*

- Ralf Korn (Technical University of Kaiserslautern, Department of Mathematics),
- Bernt Oksendal (Oslo University, Department of Mathematics),
- Wolfgang J. Runggaldier (University of Padova, Department of Pure and Applied Mathematics),
- Mete Soner (Sabanci University, Faculty of Management),
- Gerhard-Wilhelm Weber (Middle East Technical University, Institute of Applied Mathematics).

*Organizing Committee*

- Inci Batmaz (Dept. of Statistics; IAM, METU, Ankara),
- Azize Hayfavi (IAM, METU, Ankara),
- Jale Körezlioğlu (President's Office, METU, Ankara),
- Devin Ali Sezer (IAM, METU, Ankara),
- Ömür Uğur (IAM, METU, Ankara),
- Gerhard-Wilhelm Weber (IAM, METU, Ankara; chair),
- Kasirga Yildirak (IAM, METU, Ankara; Trakya University, Turkey);
- Assistant to the Committee: Zehra Eksi (IAM, METU, Ankara).

*Coorganizing Institutions and Sponsors*

(further ones will follow):

- Institute of Applied Mathematics, METU, Ankara, Turkey,
- Middle East Technical University (METU), Ankara, Turkey,
- Department of Mathematics, METU, Ankara, Turkey,
- EURO Working Group on Continuous Optimization (EUROPT).

