Economics Bulletin

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Conference Announcement

<u>Current challenges in finance : New theoretical approaches in financial and</u> <u>banking risk management</u>

Location : Villetaneuse, France

Organizers : CEPN, MSH, and LAGA

Major Topics : Economics of Banking and Financial Markets, Mathematical Finance, Mean Field Games Conference Dates : 11/12/2009 to 11/12/2009

Submission Deadline : 9/30/2009

Send Submissions To: Jean-Michel Courtault (courtault.jean-michel@univ-paris13.fr)

Sponsoring Organizations :

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The magnitude and the difficulty of the current financial crisis underscores the importance of developing new approaches to the study of events which cause market instability. The study of new forms of financing, the analysis and management of financial and banking risk, the consideration of complex systems and networks, the study of interactions among a large number of agents are all major challenges on the frontiers of finance, economics and mathematics. This meeting provides an interdisciplinary forum for the discussion of these issues in the hope and the expectation that the confrontation of ideas from the fields of economics, management and mathematics will be fruitful. More fundamentally, the purpose of this meeting is to study any subject which might shed light on the problems which have been identified in relation to the current crisis. This includes but is not limited to the following: - What are the advantages and limitations of the concept of "value at risk"? - What role do problems of liquidity play in derivative markets? - Did financial innovations and prudential regulation contribute to pro-cyclicity in the behaviour of banks and financial intermediaries? - How can one define new measures of financial risk? - How can one define new measures of liquidity risk in the evaluation and management of derivatives? - How can one take into account the effect of individual interactions on the market? - What has been the influence of the various rating agencies? Finally, the mathematical theory of mean field games (MFG) represents a new paradigm and a promising new mathematical tool in the study of the interaction among the strategies of a continuum of agents. In the realm of financial markets, MFG can be used to study the dynamics of opinions in a population with heterogeneous beliefs, and to take into account the effects of competition among banks in risk taking. In order to make the theory of mean field games better known, a special session on its applications will be held in conjunction with an introductory minicourse for economists to this new theory. This meeting is open to finance and banking professionals as well as researchers. Its purpose is to encourage multidisciplinarity. Young researchers (doctoral and postdoctoral level) are encouraged to participate. - The theory of mean field games and its applications in finance, Three half-day special sessions of invited papers, as well as a round table discussion will be held on the following topics: - Recent approaches in the evaluation and management of risk, - New dimensions in banking and financial risk, - Round table: what lessons were drawn by the mathematical and the financial communities from the recent financial crisis? Keynote speaker: • Pierre-Louis Lions (Collège de France) on mean field games Invited speakers: • Nicolas Bouleau (ENPC) on the mathematisation of risks • René Carmona (Princeton University) on finance and global warming • Edouard Challe (Ecole Polytechnique) on volatility • Dominique Garabiol, (Caisse Nationale d'Epargne) on banking risk • Olivier Guéant, (Université Paris Dauphine) on mean field games • Jean-Michel Lasry (Université Paris Dauphine) on mean field games • André Orléan (EEP-CNRS et EHESS) on beauty contests • Philip Protter (Cornell University) on liquidity risk • Xavier Ragot (EEP-CNRS et Banque de France) on finance and crisis • Walter Schachermayer (Université de Vienne) • Albert Shiryaev (Steklov Institute, Moscou) on Brownian motion in mathematical finance • Frank Taïeb (économiste de banque, risk manager) on banking and models risks • Gabriel Turinici (Université Paris Dauphine) on mean field games The colloquium welcomes additional contributions on the topics described above. Both theoretical and empirical papers will be considered. The deadline for submission of contributed papers is September 30, 2009 (abstracts alone are not sufficient). Submissions should be sent to Jean-Michel Courtault (courtault.jean-michel@univ-paris13.fr). The registration will be managed by Chantale Darin darin.chantale@univ-paris13.fr, Université Paris 13, 99 rue Jean baptiste Clément, 93430 Villetaneuse. Scientific committee: For Mathematicians: Youri Kabanov (Université de Franche-Comté, youri.kabanov@univ-fcomte.fr) Francisco Russo (Université Paris Nord, russo@math.univparis13.fr) For Economists/Management: Jean-Bernard Chatelain (Université Paris 1, Jean-Bernard.Chatelain@univparis1.fr) Dominique Plihon (Université Paris Nord, dplihon@orange.fr)

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