

Humboldt Distinguished Lecture Series in Applied Mathematics

Freddy Delbaen

Monetary Utility Functions

This lecture series is intended for graduate students in mathematics and economics. This year it is given by a pioneer in mathematical economics and functional analysis. The talks take place

October 20th; 17:15 - 18:45
Johann-von-Neumann Haus; Room 1.013

October 21st; 16:15 - 17:15 and 17:45 - 18:45
Johann-von-Neumann Haus; Room 1.013

These lectures will cover the theory of monetary utility functions (or risk measures). The one period case together with duality arguments will give us the representation theorem. The more period case, especially the time consistent one, will make the bridge to Backward Stochastic Differential Equations. Some special topics that might be covered (depending on time) are: Law determined utility functions; Mackey continuous convex functions and the relation with functional analysis; Uniqueness and Existence of solutions for special BSDE; BSDE with unbounded terminal values.

Organizer:

Ulrich Horst
Chair of Applied Financial Mathematics
Humboldt-Universität zu Berlin

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In collaboration with the *Berlin Mathematical School*, the SFB 649 "Economic Risk" and the RTG 1845 *Stochastic Analysis with Applications to Biology, Finance and Physics*

On October 1, 1995, **Freddy Delbaen** was appointed full Professor at the Chair of Financial Mathematics at ETH Zürich. He directed many projects in this field. He retired end of May 2008. He is still active as a professor emeritus. Since 2011 he is also invited professor at the University of Zurich.

Born November 21, 1946, in Duffel, Antwerp, Belgium, Freddy Delbaen studied mathematics at the Free University of Brussels (VUB) and graduated from there in 1971. The subject of his Ph.D. dissertation was Mathematical Economics. From 1971 until 1995 he was professor at the VUB and at the University of Antwerp.

Freddy Delbaen has published many papers in journals dealing with pure and applied mathematics, as well as insurance and financial mathematics. He was invited Professor at many universities in Japan, Australia and China. He gave several talks as invited speaker at international conferences like the biannual meeting of the Bachelier Finance Society (BFS). He was president and vice president of BFS. He is now an honorary member of BFS. His research deals with the mathematical theory of arbitrage and the study of risk measures. Together with P. Artzner, J.M. and D. Heath he introduced the concept of risk measures and made the link to mathematical finance.

Freddy Delbaen is a recipient of many prizes including the Louis Empain Prize, the David Garrick Halmstad Prize (2007 and 2012) and The international INA prize for actuarial Sciences, awarded by the Accademia Nazionale dei Lincei (Rome).

He is Fellow of the Institute of Mathematical Statistics and a (first generation) Fellow of the American Mathematical Society.