
Humboldt Distinguished Lecture Series in Applied Mathematics

Risk and Uncertainty in Optimization

R. Tyrrell Rockafellar

This lecture series is intended for graduate students in mathematics and economics with an interest in optimization and finance. It is given by a pioneer in optimization and convex analysis and takes place:

**January 8th; 11:00 - 13:00 and 15:00 - 17:00;
Johann v. Neumann Haus; Room 0.307.**

**January 9th, 11:00 - 13:00 and 15:00 - 17:00;
Johann v. Neumann Haus; Room 1.013.**

The lectures cover an array of topics from convex analysis, optimization and risk theory including:

- The fundamentals of optimization and the special role of convexity.
- Approaches to optimization modeling in the face of uncertainty.
- Risk measures as surrogates for "overall cost" in a random variable and deviation measures.
- Safeguarding concepts and their dualization through risk envelopes.
- Error measures and generalized linear regression, with applications to risk tuning in factor models.

There is no registration. For further information and program, please visit

www.math.hu-berlin.de/~horst/

Organizer:

Ulrich Horst
Deutsche Bank Professor of Applied Financial Mathematics

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In collaboration with the *Berlin Mathematical School* and the *Quantitative Products Laboratory*, a joint venture of *Deutsche Bank AG*, *Technische Universität Berlin* and *Humboldt-Universität zu Berlin*.

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R. Tyrrell Rockafellar is Professor Emeritus at the University of Washington where he pioneered in the mathematics of optimization and its many applications. He is currently also associated with the University of Florida for collaborations in the theory of risk. His awards include the *Dantzig Prize* (1999), *The Lanchester Prize* (1998), the *von Neumann Theory Prize* (1999), and honorary doctorates from several universities. Among more than 200 publications are his books "Convex Analysis" (1970) and "Variational Analysis" (1998) which have long become standard references.

