



Nash Distinguished Lecture Series in Quantitative Finance

The Duality of Money

by Walter Schachermayer, University of Vienna

Tuesday, September 7, 2010 • 4:30 p.m. • Rashid Auditorium, Hillman Center

Reception immediately following the lecture.

The dual relationship between goods and their prices is a classical idea in economics that, in the realm of mathematical finance, leads to the “Fundamental Theorem of Asset Pricing.”



Schachermayer, Professor of Mathematics at the University of Vienna, with Freddy Delbaen proved the Fundamental Theorem of Asset Pricing in its general form. Later, with Carnegie Mellon’s Dmitry Kramkov, Schachermayer established the definitive methodology for using duality to solve the problem of optimal investment. For this work, Schachermayer became the first mathematician to receive the Wittgenstein Award, Austria’s highest scientific honor.

In this year’s Nash Lecture, Schachermayer will discuss recent research on the Fundamental Theorem of Asset Pricing and its application to modern, complex financial markets.

About Computational Finance at Carnegie Mellon:

International banks and financial institutions use financial models produced by the world-class faculty who are members of Carnegie Mellon’s Center for Computational Finance. These experts in mathematics, finance, statistics and computer science work collaboratively to produce new tools for the financial community and to educate students through bachelor’s and master’s degree programs in computational finance. The Master of Science in Computational Finance program, offered in Pittsburgh and New York, is considered among the best graduate-level quantitative finance programs in the world.

The lecture series is named after John F. Nash, Jr., who earned his bachelor’s and master’s degrees in mathematics in 1948 from the Carnegie Institute of Technology, and his doctorate in mathematics from Princeton University in 1950. In 1994, Nash, along with John Harsanyi and Reinhard Selten, received the Nobel Prize in Economics for his pioneering analysis of equilibria in the theory of non-cooperative games. This work, sometimes called the Nash Equilibrium, has greatly influenced research in economics and finance.

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