



Institute for Mathematics and its Applications

# The Best of All Possible Worlds: The Idea of Optimization

Optimization, one of the most utilized branches of applied mathematics, is the study of problems which can be formulated as maximizing some quantity of interest by controlling related quantities. The idea of optimization is intimately connected with modern science. Pioneers like Galileo, Fermat, and Newton, were convinced that the world had been created by a benevolent god who had established the laws of nature as the most efficient way to achieve his purposes: in short, this is the best of all possible worlds, and it is the task of science to find out why and how. Gradually this view was overturned, leaving optimization as an important tool for the human-engineered world. More recently, game theory has come to replace optimization for describing situations where a multitude of individuals with conflicting interests make decisions based on imperfect information. In this lecture, Professor Ekeland will guide us along the path from Fermat to modern economic theory, and from optimization to game theory.

Tuesday, March 4, 2008

7:00 pm

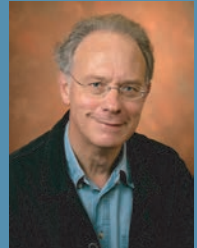
125 Willey Hall

225 19th Avenue South

University of Minnesota, Minneapolis

Photo by Robert Palais

**MATH MATTERS**  
IMA Public Lecture Series



**Ivar Ekeland**

Canada Research Chair in Mathematical Economics at the University of British Columbia, a former President of Université Paris-Dauphine, and the author of several popular books, including *The Best of All Possible Worlds: Mathematics and Destiny*, which was named one of the top 10 books of 2006 by *New York* magazine.



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