



LEHIGH UNIVERSITY INFORMS STUDENT CHAPTER DISTINGUISHED SEMINAR SERIES

TITLE:

Applying Variational Analysis Technology to the Fusion of Hard and Soft Information in Statistical Estimation

SPEAKER:

Roger J-B Wets

University of California, Davis

TIME & LOCATION:

Mon Mar 09, 2:00-3:00pm, Mohler Lab, #451

Abstract

To describe the stochastic environment in descriptive or prescriptive models, it is implicitly assumed that enough data will be available to guarantee the validity of a decision or the consistency of a statistical estimate. Unfortunately, in a real life environment, the data available is rarely enough to reach the asymptotic range, either because it is not available or there is not enough time to collect an adequate data base before decisions or estimates must be produced. One serious shortcoming is our ability to blend data and non-data information, in other words, our inability to deal comprehensively with the fusion of hard and soft information. The lecture deals with these new theoretical and numerical challenges viewpoints.

Bio sketch

Roger J-B Wets received his Ph.D. in Engineering Sciences in 1965 from the University of California at Berkeley and is now a Distinguished Research Professor of Mathematics at the University of California, Davis with which he has been associated since 1984. His main research interests have been stochastic optimization and variational analysis. During the last decade his research has been focused on equilibrium problems in a stochastic environment, and on nonparametric estimation, in particular in the fusion of hard and soft information. He has published about 200 technical articles, mostly in pure and applied mathematical journals, but also in journals dealing with probability, statistics, economics and ecology. He received a Guggenheim Fellowship in 1982-83, an Erskine Fellowship in 1991. In 1992, he was made a foreign member of the Ukrainian Academy of Sciences. In



1994, he was awarded the (SIAM-MPS) G.B. Dantzig Prize in Mathematical Programming for his contributions to stochastic programming and variational convergence. In 1998, he received the Lanchester Prize (INFORMS) for the book 'Variational Analysis' that he co-authored with R.T. Rockafellar which appeared in Springer's 'Grundlehren der mathematischen Wissenschaften.'

In 2002, he was awarded a Doctor Honoris Causa by the University of Vienna for his contributions to mathematics, statistics and economics and in 2004, he was recognized as a pioneer in the field of stochastic optimization at the 10th International Conference on Stochastic Programming.