Department of Mathematical Sciences

Seminar in Stochastic Systems

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Nonsmooth Variational Analysis and Its Applications

Monday, December 1, 2003
3:30 pm
Pierce 218

Abstract: Modern variational analysis has been recognized as a fruitful area in mathematics
that, on one hand, is concerned with the study of optimization-related problems and, on the
other hand, applies variational methods to a broad spectrum of non-variational systems. This
area includes contributions from numerous fields of applications, where the focus is on
optimization of functions relative to constraints. A great many problems arise when
attempting to analyze functions and mappings that are nonsmooth, i.e., nondifferentiable in
the classical sense. Nonlinear systems and variational principles in physics, economics, and
other applied sciences give rise to such nonsmooth structures, and these are some of the prime
motivations for the development of new forms of analysis.
This talk provides an overview of the basic principles and applications of nonsmooth
variational analysis including some recent developments.

Professor Mordukhovich is a leading expert in nonsmooth analysis. He is one of the creators of
the Kruger-Mordukhovich nonsmooth calculus. Boris Mordukhovich is the author of more than
90 scientific publications, as well as a monograph in the area of approximation methods in
optimization and optimal control.

Refreshments will be served at 3:20 pm.
For more information contact Prof. Darinka Dentcheva at ddentche@stevens-tech.edu or call
201-216-5449.