Boris Mordukhovich (boris@[omit]math.wayne.edu) Department of Mathematics, Wayne State University, Detroit, MI 48202; and **Nguyen Mau Nam*** (nam@[omit]math.wayne.edu), Department of Mathematics, Wayne State University, Detroit, MI 48202, *Nonsmooth Analysis of Marginal Functions and Set-Valued Mappings with Applications to Optimization and Stability.*[1]

Abstract. Nonsmooth analysis refers to the study of generalized differential properties of sets, functions, and set-valued mappings without imposing differentiability of the data. Having been developed for more than four decades, it has become one of the active research areas in mathematics. In this talk, after reviewing some preliminary material from nonsmooth analysis, we present a generalized differential approach to obtaining necessary optimality conditions in nondifferentiable programming. We also derive sufficient conditions ensuring the preservation of Lipschitz and related properties for set-valued mappings under various operations as well as sufficient conditions for the Lipschitz continuity of marginal functions.

Biographical Sketch. Nguyen Mau Nam was born in Vietnam and received his B.S. and M.S. degrees in Mathematics from Hue University in Vietnam. He completed his Ph.D. in Mathematics from Wayne State University in 2007 under the direction of Boris Mordukhovich.

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[1]The [`omit`] should be omitted when sending email. It was included here to avoid automatic "harvesting" by spam-list makers.