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**Elena Constantin\*** (constane@pitt.edu), Mathematics Department, 130 Krebs Hall, University of Pittsburgh at Johnstown, 450 Schoolhouse Rd., Johnstown, PA 15904. *Optimality Conditions in Nonsmooth Set Constrained Minimization.*

The goal of this talk is to provide higher order sufficient conditions for a point  $\bar{x}$  to be a local isolated minimizer of order  $n \geq 2$  of an arbitrary function  $F : X \rightarrow \bar{I}\mathbb{R}$ , on a constraint set  $D \subseteq X$ ,  $X$  Banach space, using Ginchev's higher order lower derivatives. Higher order necessary conditions are also given. The optimality conditions are formulated in terms of contingent vectors to the constraint set at the minimum point. Some examples are analyzed. (Received January 21, 2007)