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Libin Mou* (mou@bradley.edu), Department of Mathematics, Bradley University, Peoria, IL 61625. *Subdifferentials of functions on metric spaces with convex tangent spaces*. Preliminary report.

The concepts of generalized gradient and subdifferential are introduced for functions on a metric space with convex tangent cones. The properties of these new concepts will be discussed. As an application, a variational analysis is developed for solving optimization problems on metric spaces. (Received August 08, 2007)