1025-49-229   **Yuri S. Ledyaev*** (`ledyaev@wmich.edu`), Department of Mathematics, Western Michigan University, Kalamazoo, MI 49008. *Variational Methods for Optimization on Manifolds.* Preliminary report.

We discuss recent developments in nonsmooth analysis on smooth manifolds. In particular, we are interested in applications of variational and optimization approach to generalization of few classical theorems for the case of manifolds of nonpositive curvature. Also new criteria for convexity of sets on such manifolds are derived in the framework of this approach. (Received January 23, 2007)