1106-49-968 **Robert J Kipka*** (kipka@mast.queensu.ca) and **Yuri S. Ledyaev**. *Pontryagin Maximum Principle for Control Systems on Infinite Dimensional Manifolds.*

We discuss a mathematical framework for the analysis of optimal control problems on infinite-dimensional manifolds which can arise in the study of certain partial differential equations. We present techniques of nonsmooth analysis and Lagrangian charts and illustrate their use for the study of global variations of trajectories and derivation of the Pontryagin Maximum Principle for infinite-dimensional problems. (Received September 09, 2014)