1133-47-30 **Jinlu Li*** (jli@shawnee.edu), 940 Second St., Portsmouth, OH 45662. *Ordered Variational Inequalities on Partially Ordered Banach Spaces.* Preliminary report.

The concept of ordered variational inequalities on partially ordered Banach spaces is a natural extension of vector variational inequalities on Banach spaces. The results about ordered variational inequalities are immediately applied to solving ordered optimization problems. In this paper, we prove the solvability of some ordered variational inequalities by using some fixed point theorems on partially ordered Banach spaces, in which the considered mappings may not be required to have any type of continuity and they just satisfy some order-monotonic conditions. As a generalization of the definition of ordered variational inequalities, we introduce the concept of constrained ordered variational inequalities and constrained ordered optimization problems. We also study the existence of solutions for these problems and investigate the inductive properties of the solution sets. (Received May 29, 2017)