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**Jong Uhn Kim\*** ([kim@math.vt.edu](mailto:kim@math.vt.edu)), Department of Mathematics, Virginia Tech, Blacksburg, VA 24061-0123. *Stochastic variational inequality associated with elasto-plastic torsion.*

In this talk, we will discuss an initial value problem for a stochastic variational inequality associated with elasto-plastic torsion. The goal is to establish the existence and uniqueness of a solution. The stochastic problem is reduced to essentially a deterministic problem, which is not covered by existing results on evolution variational inequalities. We propose a definition of a solution in the same spirit as for weak solutions of partial differential equations, and derive some basic consequences of our definition. Based on these results, we can prove the existence and uniqueness of a solution to the stochastic problem. (Received January 23, 2014)