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Kavita Ramanan* (kramanan@math.cmu.edu), 6208 Wean Hall, Department of Mathematical Sciences, Carnegie Mellon University, Pittsburgh, PA 15213-3890, **Rami Atar**, Department of Electrical Engineering, Israel Institute of Technology (Technion) Haifa, Israel, and **Amarjit Budhiraja**, Department of Statistics and OR, University of North Carolina, Chapel Hill, NC 27599. *Uniqueness of Solutions to Stochastic Differential Inclusions*. Preliminary report.

We formulate a general sufficient condition for uniqueness of solutions to stochastic differential inclusions associated with a piecewise constant vector field with multiple intersecting surfaces of discontinuity in the interior of the domain. We illustrate the usefulness of this condition by applying it to analyze various classes of models arising in applications. If time permits, we will also discuss how this condition can be used to obtain new large deviation results. This is joint work with Rami Atar and Amarjit Budhiraja. (Received February 21, 2004)