1154-60-689 **Mela Hardin*** (melahardin@asu.edu) and **Nicolas Lanchier**. *Probability of Consensus in Spatial Opinion Models with Confidence Threshold.*

Interacting particle systems is a field of probability theory devoted to the rigorous analysis of certain types of models that arise in other fields such as physics, biology, and economics. One popular example of such systems is the voter model for the dynamics of opinions. We study two spatially explicit stochastic opinion models that are variants of the voter model. Both processes are characterized by two finite connected graphs – the spatial graph and the opinion graph. The spatial graph represents the social network describing how individuals interact. The opinion graph represents the topological structure of the opinion space. Representing opinions on a graph induces a distance between opinions which we use to measure disagreements among individuals. Pairs of neighbors on the spatial graph interact at rate one. Each interaction results in a local change of opinion only if the two interacting individuals do not disagree too much, which we quantify using a confidence threshold. We study and derive lower bounds for the probability that, after an almost surely finite time, the system reaches consensus for some finite connected spatial graphs in the two models. (Received September 09, 2019)