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**Anna Mummert\*** (mummerta@marshall.edu), **Jessica Shiltz**, **Robert Hughes**, **Roger Estep** and **Marcia Harrison**. *Agent-based Modeling of Seasonal Influenza*. Preliminary report.

In this talk I will describe a suite of susceptible-exposed-infectious-recovered (SEIR) agent-based models for simulating an influenza outbreak developed in the Netlogo programmable environment. The models include a base seasonal model and the control strategies of isolation, quarantine, vaccination, and antivirals. Several models were created to explore the mechanism responsible for the second peak of infections seen in the 2009 H1N1 influenza pandemic, including a periodic transmission rate, waning immunity, and two interacting populations. Model assumptions will be specified, preliminary results will be given, and a corresponding classroom case study will be described. (Received February 03, 2015)