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UVM Student Research Conference  
April 19, 2012

Title: Chaotic social contagion, from zombies to hipsters

Abstract: Simple, binary state (on/off) dynamical processes on networks are a tractable modeling framework relevant to many spreading processes in social, biological, or physical systems. Example applications are to social contagion and marketing, percolation in materials, and infectious diseases (including zombies). These models are closely related to toy models of magnetism which are the canonical example for phase transitions, emergence in the language of complex systems. When nodes are allowed to deactivate after being active, the dynamics may not reach a steady state. I will present preliminary results on a model that exhibits macroscopic chaos, where the bifurcation parameters are related to network structure and node update synchronicity. Individual node response functions can be interpreted as a way of modeling the “hipster”-ish adoption of fads.