1163-91-1106 **Heather Zinn Brooks*** (hzinnbrooks@g.hmc.edu), **Franca Hoffmann**, **Alexander Pan** and **Mason A Porter**. *Bounded-confidence models for media impact on online social networks.* Preliminary report.

Online social media networks have become extremely influential sources of news and information, and content that spreads on online social networks can have important consequences on public opinion, policy, and voting. To better understand the online content spread, mathematical modeling of opinion dynamics is becoming an increasingly popular field of study. In this talk, I will introduce an agent-based model of media impact on opinion dynamics on online social networks. I will then discuss the emergence of consensus versus multiple ideological states (e.g., 'echo chambers') in this model. To further understand these qualitative dynamics, we derive and study a mean-field integro-differential equation of the full network model, which we can use to gain deeper insight into the stationary states and bifurcations in the distribution of opinion states. (Received September 14, 2020)