1154-91-209   **Heather Zinn Brooks*** (`hbrooks@math.ucla.edu`) and **Mason A Porter**. *A Model for the Influence of Media on the Ideology of Content in Online Social Networks.*

Many people rely on online social networks for news, and the spread of media content influences online discussions and impacts actions offline. To examine such phenomena, we generalize bounded-confidence models of opinion dynamics on a social network by incorporating media accounts as influencers. We quantify partisanship of content as a continuous parameter, and we present higher-dimensional generalizations to incorporate nuanced political positions and content quality (a key novel contribution of our work). We use simulations to quantify the entrainment of non-media content to the ideologies of media accounts. We maximize media impact over a social network by tuning the number of media accounts that promote the content and the number of followers per account. We find that entrainment of the ideology of content spread by non-media accounts to media ideology depends on structural features of the network. Finally, we incorporate multiple media sources with ideological biases and quality-level estimates drawn from real media sources to demonstrate that our model can produce communities that are polarized in both ideology and quality. Our model provides a step toward understanding content spreading dynamics, with ramifications mitigating the spread of undesired content. (Received August 23, 2019)