

1156-91-5

**Feng Fu\*** ([feng.fu@dartmouth.edu](mailto:feng.fu@dartmouth.edu)), 27 N. Main Street, Hanover, NH 03755. *Coevolution of Homophily and Cooperation in Dynamic Social Networks.*

Social interaction networks exist at many scales of biological organization, from the level of multicellular aggregates to human societies. These networks often have an exquisite structure that promotes cooperation. The formation of social ties and cooperative interactions is endogenously driven by homophily, i.e., the phenomenon that “birds of a feather flock together.” Individuals tend to bond with and cooperate with someone else who resembles themselves. In this talk, I will present my recent work on studying coevolutionary dynamics of homophily and cooperation in social networks. These results may help us understand how phenotypic similarity leads to social ties (“structure”) and cooperation (adaptive “function”) of social networks. (Received September 03, 2019)