

1145-91-88

Igor Erovenko* (igor@uncg.edu) and **Mark Broom**. *The evolution of cooperation in mobile populations with costly movement on evolving multiplayer networks.*

We create stochastic simulations of a finite evolving population of individuals on a network. Individuals move around the network following a Markov process and interact with each other via a public goods game. We investigate how the population size, movement cost, exploration time, and network structure affect the evolution of cooperation. This modeling framework allows to extend the analytic approach of Pattni, Broom, and Rychtar (2018) for complete graphs to arbitrary networks. (Received July 26, 2018)