1145-91-566 **Yuanying Guan*** (`guany@iun.edu`), 3400 Broadway, Gary, IN 46408, and **Micah Pollak**.
Contagion in Heterogeneous Financial Networks.

We extend the financial network contagion model of Gai P. and Kapadia S. to investigate the interaction of several types of heterogeneity found in real world banking systems. The first source of heterogeneity originates in the distribution of assets across banks in the financial system. The second source is in how individual banks then distribute these assets among their neighbors. We characterize how these two sources of heterogeneity interact to affect the probability and extent of financial contagions in three network structures. We find that greater heterogeneity has a stabilizing effect for networks that are sparsely connected and a destabilizing effect for networks that are highly interconnected. Finally, we consider multiple sequential shocks and find that when banks redistribute assets following an initial mild contagion it increases the stability, on average, of the system to subsequent shocks originating at weakened banks. (Received September 10, 2018)