1138-05-264 **Hamed Amini*** (amini@math.miami.edu), Coral Gables, FL 33146. *Bootstrap Percolation in Inhomogeneous Random Graphs.*

A bootstrap percolation process on a graph G is an "infection" process which evolves in rounds. Initially, there is a subset of infected nodes and in each subsequent round every uninfected node which has at least θ infected neighbours becomes infected and remains so forever. We consider this process in the case where the underlying graph is an inhomogeneous random graph whose kernel is of rank 1. Assuming that initially every vertex is infected independently with probability p, we provide a law of large numbers for the number of vertices that will have been infected by the end of the process. We also focus on a special case of such random graphs which exhibit a power-law degree distribution with exponent in (2,3). We show the existence of a critical function $a_c(n)$ such that $a_c(n) = o(n)$ with the following property. Let n be the number of vertices and let $a(n)$ be the number of the vertices that are initially infected. If $a(n) << a_c(n)$, then the process does not evolve at all, with high probability as n grows, whereas if $a(n) >> a_c(n)$, then with high probability the final set of infected vertices is linear. This is based on joint work with Nikolaos Fountoulakis and Konstantinos Panagiotou. (Received February 11, 2018)