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Time for graph bootstrap percolation

Bootstrap processes are types of cellular automata on graphs with two possible states, called 'healthy' and 'infected'. For a graph F and a collection of infected edges in a large complete graph, the F -bootstrap process is the following update rule for the states of edges: infected edges remain infected forever and a healthy edge becomes infected iff it is the only healthy edge in a copy of F . The initial set of infected edges is said to percolate if every edge is eventually infected. The notion of F -bootstrap percolation was introduced by Bollobás in 1968 with the name weak-saturation. I will give some of the history of results on the F -bootstrap process in the case where the initially infected edges are the edges of an Erdős-Rényi random graph and will discuss some new results on the time to percolation in the K_r -bootstrap process when the initially infected edges are chosen randomly.