1121-05-160 **Karen Gunderson*** (karen.gunderson@umanitoba.ca), Department of Mathematics, University of Manitoba, Winnipeg, MB R3T 2N2, Canada. *Infinite trees and bootstrap percolation.*

A bootstrap process is a type of cellular automaton, acting on the vertices of a graph which are in one of two states: 'healthy' or 'infected'. For any positive integer r, the r-neighbour bootstrap process uses the following update rule: infected vertices remain infected forever and each healthy vertex with at least r infected neighbours becomes itself infected. These updates occur simultaneously and are repeated at discrete time intervals. Percolation is said to occur if all vertices are eventually infected.

Of interest is the random case, where each vertex is infected independently with a fixed probability p. For an infinite graph, one would like to know the values of p for which the probability of percolation is positive. I will give some of the history of this problem for regular trees and present some new results for bootstrap percolation on certain classes of randomly generated trees: Galton–Watson trees. (Received July 17, 2016)