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Bootstrap percolation on infinite graphs

In r -neighbour bootstrap percolation, vertices of a graph are either 'healthy' or 'infected' and infection spreads to a healthy vertex with at least r infected neighbours. Percolation is said to occur if all vertices are eventually infected. When vertices are infected initially at random, the main question is the value of the critical probability – where percolation becomes more likely than not. I will present results on how the variance of vertex degrees affects the value of the critical probability in Galton–Watson trees and discuss some open problems on the critical probabilities for infinite regular graphs including Cayley graphs.