

Watts Threshold Model for SIR Epidemics on Configuration Networks

Greg Rempala

Abstract:

The Watts Threshold Model (WTM) describes contagion on networks where nodes adopt only after a threshold fraction of their neighbors are active. This captures complex contagion processes requiring reinforcement from multiple contacts. On random networks, WTM dynamics can be analyzed through self-consistency equations, linking global cascades to percolation-like thresholds. Discussion of possible applications to social network to follow.