

Project Plan

Rumor Propagation on a Spread-out Lattice Graph

Spring 2023

Faculty Mentors: Partha S. Dey

Project Leader: Daecheol Kim

IGL Scholars: Yongzheng Yang, Hansen Liu, Tianyi Huang

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1 Project Goals

- Simulate a model for different values of distance d and the number of nodes n .
- Find the threshold d^* with an upper bound and lower bound.
- Analyze the growing structure (behavior of the structure) with other random variables. Simulate the above for different goals, i.e. percentage of nodes being touched with time t if time permits.
- Explore and compare strategies to find the almost optimal cost.
- Simulate the above model for general graphs (which reflect the real world) if time permits.

2 Responsibilities

- On Tuesday, team members will present their progress to the faculty mentor and select topics to focus on next week.
- On Friday, team members will discuss selected topics and report partial progress with the project leader.

3 Meeting Times

- Weekly at 5pm, Tuesday: meet with faculty mentor.
- Weekly at 3pm, Friday: meet with the graduate student mentor.