

Math 455 Project List

NAME: _____

(1) Below please find a list of possible topics for a Math 455 Project. You may have to do some searching to find out what the topic is about. Please rank your top 3 choices as topic for a project. If you have a project in mind that is not on this list, please provide a short paragraph describing the topic and giving at least one reference.

FIRST CHOICE: _____

SECOND CHOICE: _____

THIRD CHOICE: _____

(2) List up to five people in the class that you would like to have on your team.

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- A. Coding Theory: This is the science of sending information across a noisy channel efficiently while minimizing errors
- B. Expander Graphs in context of application to networks
- C. Graph theory in social networks (such as Facebook, Twitter, etc.)
- D. Scheduling Problems
- E. Google PageRank
- F. DebtRank (networks of financial institutions)
- G. Traffic Network Design
- H. Electrical Network Analysis
- I. Graph Theory in Operations Research
- J. Graph Theory in Puzzles and Games
- K. Applications of Random Walks on Graphs (could be in context of BitTorrent file sharing, or Twitter/other social networks, or transmission of communicable diseases etc.)
- L. Graph Theory in Linguistics
- M. Graph Theory and the Museum Guard Problem