Graphs and Networks
AMTH/CPSC 462/562

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Course Feedback 2010

Since I hope to teach this class for many years, I would like to get your suggestions for how I can make it better. I have assembled a list of questions that I hope will prompt useful suggestions. If you have any suggestions not related to these questions, please give me these as well. If there is anything that you really liked, please let me know that too.

Feel free to hand this in at the end of class or drop it in my mailbox some time. I'll place a copy of this form on the web, so you can even do both.

Don't worry about trying to be tactful. You can be anonymous.

1 Unprompted Comments and Suggestions

2 Who left?

If you know students who dropped the class, can you tell me why and whether I should have done anything differently to keep them?

3 Theory vs. Experiments

I tried to make the class a combination of theoretical material and practical material. Did it work?

4 Prerequisites

How adequate was my description of the prerequisites for the class:

> "To take this class, one should probably have had courses in discrete mathematics, probability, and linear algebra. Some more advanced courses in mathematics, statistics, or computer science would help."

5 Problem sets

- Do you think I should give more or fewer problem sets next year?

- Did the problem sets help you learn the material? Were they worth the effort?

- What did you think about the experimental option on the problem sets?

- How did you feel about my policy on collaboration?

6 Solution sets

- Did you actually look at the solution sets?

- Were the solution sets helpful?

7 Lectures Notes

- Were the lecture notes helpful?

- Did you miss the ones I didn't write?

8 Lectures

I have included a list of the topics covered on the next two pages. Feel free to make comments on this list, or below.

- Are there any topics that you think I covered particularly well?

- Are there any topics that you think I covered particularly poorly? What should I have done differently?

- Were there any topics that you found particularly exciting or boring, independent of whether or not I covered them well?

- Did you like the demos that I did in class? Were they helpful or entertaining?

9 List of topics

1. Empirical studies of graphs.

2. Erdos-Renyi random graphs, the giant component and low diameter.

3. Navigable small-world graphs.

4. Preferential attachment models of graphs with power-law degree distributions.

5. Random walks and diffusion.

6. Conductance and the rate of convergence.

7. The Holistic proof of convergence of random walks

8. Personal PageRank and Spilling Paint

9. Rubber Bands and Resistor Networks, effective resistance.

10. Counter-Intuitive Phenomena in Networks.

11. PageRank and Random Walks on Directed Graphs.

12. The PageRank Axioms

13. Link Prediction

14. Graph Clustering.

15. Gossip Algorithms.

16. Flocking.

17. Geometric Graphs

10 Any other suggestions?

11 Are you willing to tell me anything about yourself? For example, are you a grad or undergrad, and what is your major?