Math 824, Spring 2015
Final Project

Summary

Read a current research article in combinatorics, give a short talk (20 minutes) on it to an audience of fellow graduate students, and provide constructive criticism on another student's talk.

Article selection

Each student enrolled in Math 824 should meet with Jeremy individually to select a paper to read. Before the meeting, think about which topics from the course have interested you and that you'd like to pursue. If you want, you can start looking for your own article using MathSciNet (requires KU login) or the arXiv. The paper should ideally not be longer than 20 pages. You must get final approval from Jeremy (two students cannot read the same article). You should have your article chosen by no later than **Friday, April 10.**

Talks

The goal of your talk is to help a fellow graduate student to become familiar with the main ideas of the article. Of course, you need to understand the paper well yourself in order to explain it to others, but you do not necessarily have to prove anything in your talk (and you probably won't have time to do so anyway). You should rehearse your talk at least once, if not several times, before presenting it.

Logistics

- We will hold the talks during the final exam time slot: **Monday, May 11, 10:30 AM–1:00 PM.**
- I will bring food (unfortunately, beer is not allowed on campus).

Constructive criticism

Each student will be responsible for providing a written critique of (at least) one other student's talk. I will assign critiquers after everyone chooses their articles. In your critique, you should address these questions:

- What did the speaker explain as the major themes (e.g., definitions, methods, or theorems) of the article?
- What do you now know that you didn't know 20 minutes ago?
- What other mathematical ideas came to mind as you listened to the talk?
- What else would you like to know?
- What could the speaker have done differently to help you understand the article?

As always when giving constructive criticism to a mathematical colleague, you should be candid, respectful, and specific. The point of the exercise is for both audience and speaker to think about what makes a good presentation. As the critiquer, put yourself in the shoes of the speaker reading the comments, and think about what kind of feedback would help you evaluate your own talk and improve it for next time. Here are some examples of comments ranging from helpful to less helpful:

- Very helpful: "I get that a pseudoquasihypermatroid is intended to model pseudoquasihyperlinear independence, but I don't see how Axiom 1B reflects that?"
- Helpful: "I didn't understand the motivation behind the definition of a pseudoquasihypermatroid."
- Only sort of helpful: "I didn't understand pseudoquasihypermatroids."
- Less helpful: "Interesting talk, I liked it."