

From the Mathematics Graduate Program Director

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Welcome!

Once again I hope to share a some opinions about graduate studies.

Many mathematicians, myself included, first presented in seminar a paper given by our advisors. In my case, my advisor told me to present a paper that he was asked to referee for a journal. I used two weeks, and in the end we jointly wrote the referee report. Preparing and presenting were valuable experiences, as was writing a referee report for a journal article. As my dissertation research progressed, I presented several more time in the combinatorics seminar. My advisor also secured invitations for me to present at two conferences. Was was at Vanderbilt, and the other was at RIMS in Kyoto, Japan. I afforded the chance to meet other mathematicians and hear what they were doing. The following year, I was able to get a postdoctoral position in Japan with the RIMS conference organizer. This gave me two wonderful years overseas and time to further hone my craft. I believe that the most important aspect of presenting and going to presentations is the connections that you can make.

Best wishes,

Brian Curtin

Rambling Advice

Masters degree: Thesis vs. Qualifying exam

Masters students may complete their degree by either passing a core qualifying exam at the appropriate level or by writing a thesis. Both are fine options, but here I would like to tout the benefits of the thesis option for those aiming for a Masters as their highest degree. A thesis requires at least a year, but it may not take longer than studying for and taking a qual twice. You will meet frequently with an advisor who will help keep your progress on track (assuming you come prepared, as is your responsibility). In this sense success is more predictable. You will learn to use the tools of mathematics, such as *LaTeX* for typesetting, *MathSciNet* for literature search, and perhaps a computer algebra system for computation. Your advisor will help to polish your mathematical writing (through revision after revision) to a high standard. You will learn the practice of mathematics as you write and defend a Masters thesis. You will experience that there is more to math than taking classes and exams.

The same qualifying exam is offered to both Masters and PhD aspirants. The number of problems solved successfully distinguishes a pass at the corresponding level. The Masters pass allows a student who had intended to get a PhD to exit with a degree. Those aiming for a PhD must approach their coursework with greater intensity from day one than those aiming for a Masters.

Colloquia and Seminars

The regular Friday colloquia offers the opportunity to meet experts in various fields of mathematics. A well-designed colloquium will offer something for everyone in its first half before progressing into more advanced material. Graduate students should attend regularly to broaden their perspective on mathematics. Many mathematics departments hold this expectation. Cookies and coffee are served beforehand.

Graduate students should also attend departmental seminars (currently offered in analysis and discrete math). They provide the opportunity to learn what faculty and their students are working on. They also provide a venue to present your work later in your program. Students may participate in the discrete mathematics seminar on an S/U basis to fulfill the requirements for maintaining the teaching assistantship.