

## Math 6720s13 - Final Project

### Dates:

- 15 March: Submit a brief proposal of your topic.
- 12 April: Submit first draft of paper.
- 19 April: Submit your peer-review comments
- 3 May: Submit final draft of paper.
- Finals week: Presentations of projects

**Topic:** When choosing your topic you should keep in mind how it is related to the material we are covering in class. The chapters of Bass's book that we are covering are 1-13, 17, 19-20, 24, 28. However your topic needs to go beyond the book's scope. There are a couple of ways that could happen. You could implement a method that is presented in the book with real life data and a detailed description of what difficulties and advantages the method presented. Or you could take a topic considered in the book and consider versions or extensions of it to other contexts or deeper properties. Such a topic could be constructing Brownian motion on a non-Euclidean space. Another example is taking a SDE model and present it including details like existence of solution in an appropriate sense and also a discussion of why the model is as it is and justifying as much as possible the assumptions built into it.

Feel free to discuss the viability of your topic with me before the 22nd of March.

**Writing:** Completeness and clarity are the watch words. I expect a logically organized and pleasant format. Typesetting is to be in  $\text{\LaTeX}$  or similar (note that this means no MS-Word). If you find yourself writing less than 5 pages with a small format you have either over abbreviated your material or should add more content. When I am reading your draft I will let you know which is the case.

A good vision of how to pick a tone to write for the paper is to suppose you are writing a new chapter of the book, except that it needs to be self-contained. However your tone should match your content. But whatever tone you take you should make all due effort to polish your English grammar, usage, and mechanics.

**Peer-review:** When you turn in your rough draft on the 19th of April three people will read your paper: myself, the TA, and a randomly selected fellow student in the class. Each student will be given a paper to read and a week in which to read and comment on it. Peer reviewers should focus on readability and correctness of the paper. General standards of civility are to be maintained at all times.

**Presentation:** During finals week you will give a 25 minute talk to the class about your paper. A good talk will convey the ideas and conclusions first and as much of the rigor as possible. When giving your talk you don't need to do every algebraic step, for example. You may either use a digital projector or the board (chalk or white depending on scheduled room).

**Evaluation:** I am going to look at three qualities in your project: ambition, correctness, and clarity. This is an attempt to gauge your understanding of your topic. The more you attempt to write about the more you can show me you understand.

If you have any organizational questions do not hesitate to ask. I do not want the organization details of this to get in the way of your diving into a topic that you find interesting.