

# Workshop I

The Dissertation  
Advisor Issues

Professional Opportunities  
Your Wish List

# What is a dissertation?

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- an exposition of an original piece of research
- a good introduction to the material
- a good reference

# Take Responsibility

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- Your advisor is not your co-author.
- Know your school's rules.
  - layout
  - paper
  - deadlines
  - preliminary forms

# Manage your advisor

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- It's a new relationship.
- Keep communicating.
- Talk to other students.

# Manage your committee

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- Consult your advisor.
- Not all members are the same.
- Get on the same page.

# Manage your time

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- It's a selfish time.
- Plan each month/week/day (time vs. task).
- Have a check off list.
- Honor your free time.

# Setup for productivity

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- Pick the right time of day.
- Pick the right space.
- Design rituals.
- Clear any known distractions.
- Take breaks.

# Contents

# Contents

- Title
- Abstract
- Table of contents
- Acknowledgements\*
- Introduction - tell what you are going to do
- Background - define jargon
- Literature review\*
- Your strategies for solving the problem
- Your result - break it up
- Critical analysis of results - show you know limitations
- Future work - show you know what's missing
- Conclusions - tell what you did with reference to detail
- References
- Appendices

# Acknowledge who?

- any collaborators
- financial support
- technical/administrative/personal/emotional support

# Literature review

- History/Background
- Connect to your own ideas/results

# Beyond stapling

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## Integrate the pieces

- Introduction - Tie the work together, highlight contributions, make a roadmap.
- Body - Support, develop your results from introduction.
- Conclusion - Summarize what you did.
- Make notation, terminology, style consistent
- Adjust when needed.

# Beyond stapling

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## Expand the text

- Write for a general audience.
- Add simple examples of definitions and theorems.
- Spell out intuition.
- Mention related work in the field and how it relates.
- Point out connections to other areas of mathematics.
- Point out applications.
- Lay out future work for yourself/others Text

# Repetition is your friend

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- dissertation
- chapter
- section
- paragraph

# *Linking* ~~Repetition~~ is your friend

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- section
- paragraph

A good dissertation is a finished one.

# Some Professional Opportunities

JMM Jan 13-16 (due December 22, 2009)

AWM Workshop (due August 15, 2009)

Project Next (due ~April 2010)

PCMI - *Image Processing*

June 27 - July 17, 2010

(available November 1, 2009)

Women and Mathematics @IAS June 8-19, 2009

*Geometric PDE*

Connections for Women @ MSRI

*Homology Theories of Knots and Links* (Jan 21-22, 2010)

*Inverse Problems and Applications* (Aug 19-20, 2010)

*An Introduction to Random Matrices* (Sept 20-21, 2010)

# Other stuff

Letters of recommendation  
(research, teaching, service)

Give talks.

Talk to people at conferences.

# Your Wish List

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tenure track/postdoc  
teaching load  
class size  
student demographics  
courses  
research expectations  
size of department  
size of school  
faculty  
small town/city  
time zone  
liberal arts/RI  
sabbatical policy  
course buy-out  
grant-writing  
travel opportunities  
goal of position  
value