RPC Info Session For You!
Purpose of RPC

• To deepen your knowledge
• To train you for research
• To test your suitability for research
• To finalize a research home
Official Components

- Paper Selection: February 1
- First Report Draft Due: March 14
- Report Due: April 8
- Official PI Matching date: April 8*
- Report Grades/Feedback: By May 1
- Peer Presentations: April 15 onwards
- Final Presentation Exams: May 6, 13, 20

- In addition, mandatory training events (>75% participation)
RPC Preparation Guidelines

The paper you pick is your “seed” paper. You will use a whole cluster of related papers in your course of study and in your report.

• Work through many papers
• Study related coursework to understand the concepts
• Analyze the field your paper fits into
• What is the contribution of your paper to the area? What is the evolution of thought?
• Are there competing ideas?
• How has the field evolved since the paper was written?
• What are your thoughts and analysis?
• Iterate!
The Paper

Choose from a set of provided papers

- Content that you can relate to and build upon from your coursework
- Content that is rich enough for interesting directions (but not so complex that you will not get it, even after 1 semester of hard work)
- You should pick a paper that relates to your future area, but not necessarily identical to your future field (Confer with your advisor)
RPC Report Specifications

In the style of grant application

• 1 page summary

• 10 page report (not including references)
  • 12-point font (use common font, e.g. Calibri, Times New Roman, etc.)
  • 1 inch margins
  • Single spaced text
  • Figures numbered with figure captions and proper attribution (citation)
  • Pagination

• References
  • Numbered
  • Choose reference style common to your area (include title of paper)
Summary Page

1 page summary
Use header that includes abbreviated title of your paper, your name

Summary should capture the essentials of your report, i.e.
• How does the paper fits in to existing work?
• What are the important results and conclusions?
• What is your evaluation of the paper?
Report - Structure

• Introduction and background of the field
  • This sets up how your paper fits in to a larger context. The bulk of your citations will be in this part
• Introduction of your paper- what new finding does it introduce? what methods does it come up with? what questions does it answer?
• Report on the main finding of the paper
• Discussion of the results, comparison with other work in the field (your contributions?)
• Summary, including your evaluation
Figures

• Figures from other work
  • Use your own figure captions (no copying!)
  • Use the caption to explain why you are including it.
  • Combine figures from multiple sources to compare and contrast
  • Provide correctly formatted citations

• Figures you create
  • Is the figure well constructed scientifically?
  • Use the caption to explain what it demonstrates
  • Use the caption to explain why you are including it
  • Make sure all is legible, large enough fonts? Axes labeled with units?
  • Remember, somebody with worse eyesight will read it

• Make sure the figures are clear
  • Print the page to make sure that it prints clearly
What about this figure?

• What is OK?
• What can be improved?

Mean free path $L \sim 800\text{nm}$
Choose a paper with content that you can immediately relate to and build upon from your coursework.

The paper should have enough room for examiners to push you into intriguing directions that you may not have thought about and evaluate how they manage to reason their way through unfamiliar terrain.

Note: you may not get the correct solution, but it is your thought-process (in addition to basic concepts) that is evaluated.

Committee will offer hints when you are stuck to see if you are able to pick them up and move forward.
RPC Oral Presentation Exam

• Choose a paper with content that you can immediately relate to and build upon from your coursework

• The paper should have enough room for examiners to push you into intriguing directions that you may not have thought about and evaluate how they manage to reason their way through unfamiliar terrain.

• Note: you may not get the correct solution, but it is your thought-process (in addition to basic concepts) that is evaluated.

• Committee will offer hints when you are stuck to see if you are able to pick them up and move forward.
Report and Presentation Preparation

• Read a cluster of papers
• Use your course work to understand the concepts and methods thoroughly
RPC Report Guidelines, Plagiarism and Attribution

No plagiarism
• Do not copy text from another source, including your assigned paper

Proper attribution
• Include the citation for ideas that you use

Figures:
• Include citation
• Your figure caption (not that of the original paper.)
• Combine figures to contrast or compare
RPC Committee Component

• For the spring 2016 RPC examinations, students will be evaluated by faculty in their chosen area of study (i.e., a CE PhD student will be evaluated by CE faculty).

• 3 Faculty Members on Each Committee (not your PI)
RPC Presentation Specifications

Chalk talk format 30 min + questions

• 30 minute talk using white board
  • You can bring your lecture notes
• Handout with essential (complicated) figures allowed

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• Your committee will probe your understanding of the material, related basics (from course work)
• Examiners might push you into intriguing directions that you may not have thought about and evaluate how you manage to reason your way through unfamiliar terrain. Note: you may not get the correct solution, but it is your thought-process (in addition to your understand of basic concepts) that is evaluated.
• Committee will offer hints when you are stuck to see if you are able to pick them up and move forward.
Training Components

• Set of meetings

• How to pick a paper -> cluster of papers
  • Do you have the background to understand the science?
  • Relevance to your courses?
  • Rich enough but not too difficult concepts

• How to read a paper

• How to research related literature

• How to write a report

• How to present
  • Format “Chalk talk”
Spring Training

Faculty-Lead Training

• February (date TBD) How to read a paper (Faculty)
• March (date TBD) How to write a report (Faculty)
• April (date TBD) Presentation techniques (Faculty)

Captains’ Practices (Peer Practice)

• Paper discussions
• Feedback on reports (Pre-first draft and Pre-final drafts)
• Mock trials
Organization of Peer workshops

Today: pick contact people; Captains (at least one person per area)

• January organization meeting
• Cali will help with Spring dates, rooms (and food 😊)
• You can invite senior students or other guests to your work shops/reviews

At a minimum:

1. Draft reading and feedback
2. Final draft reading and feedback
3. Chalk talk practices with mock committees
### Captains and Co-Captains

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*Is everyone in the correct category?*