

Graduate Funding Success Workshop

April 12, 2017



WHAT DO SELECTION COMMITTEES LOOK FOR?

panel

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Political Science

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Philosophy

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Dean, Graduate School



“The measure of greatness in a scientific idea is the extent to which it stimulates thought and opens up new lines of research.”

Paul A. M. Dirac

What is the purpose of the Research Statement?

- **makes Selection Panel's decision easier**
 - gives overview of an applicant's success as a researcher
 - reveals how current an applicant's process and research is
 - demonstrates the applicant's levels of critical thinking, organization, and salesmanship
 - shows the practicality and outreach of the research
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This
PowerPoint
will be made
available
online!



Writing an *Effective* **RESEARCH STATEMENT**

a snapshot of your academic life





How am I doing
what I'm doing?

Where am I?

Where am I going?

Where am I?



Where am I?

In 2007, I joined the laboratory of Dr. Alan Sweitz, where I studied extinction models of large mammals in Africa. Then, in 2010, a funding decision moved me to the laboratory of Dr. Aimee West, where I continued my work, but this time focused on the Americas. In 2011, I was awarded Best Scholar of my institution.

The main focus of my research is developing accurate models for extinction patterns of large mammals, and I have given extensive attention to current trends in modeling behavior in both the Americas and Africa. My collaboration with my colleagues Dr. Aimee West of Wesleyan University and Dr. Alan Sweitz of the University of Columbia have allowed me to devise computer models that predict extinction patterns within 90% of accuracy.

Where am I?

- **Telling the “Story”**
 - **There are two parts to every story: the elements and their organization. Everyone has elements. Not everyone has effective organization.**
 - **Choose a theme (or two) that interests you.**
 - **Carefully select only those elements that demonstrate your theme.**
 - **Eliminate any extraneous elements, details, and/or asides.**
 - **Set up a structure that focuses on the theme.**
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Do's and Don't Do's of Telling the Story

- **Don't**
 - **Recreate your CV in story form**
 - **Include extra details or experiences**
 - **Be personal**
 - **Be cute**
- **Do**
 - **Be specific**
 - **Keep it short and to the point**
 - **Give examples of research success**

Questions About the Theme

- **What about my research excites me?**
- **What is the practical impact of what I research?**
 - **For my field?**
 - **Locally?**
 - **For the world?**
- **Why should money be spent on this idea/problem?**



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How am I doing
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How am I

My thesis work combined structural models of social networks with models of interaction from economics and analyzed this combination from a computational perspective. The field of social network theory primarily focuses on measuring the topology of naturally occurring networks and then inventing generative models that output networks of similar structure.

www.cs.cornell.edu/~ssuri/About_Me_files/SidSuriRS.pdf

A central goal of my research is the development of computationally effective tools for determining the low energy effective physics of a stack of D-branes at a Calabi-Yau singularity. The low energy physics is described by a four dimensional supersymmetric gauge theory whose form depends crucially on the Calabi-Yau geometry. IN my research, I use diverse mathematical tools, including the derived category of coherent sheaves and matrix factorizations mixed with insights from gauge theory to determine the matter content of the gauge theory and its superpotential.

web.physics.ucsb.edu/~reager/REagerResearchStatement.pdf

How am I doing what I'm doing?

- **Showing Methods**
 - Reviewers want to know what kind of researcher you are.
 - Demonstrate you are an exceptional researcher by being clear about your methods.
 - Be descriptive and concrete wherever possible.
 - Walk the fine line between over-describing and under-describing.
 - Keep your theme in mind.
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Do's and Don't Do's of Showing Methods

- **Don't**
 - Use inappropriate jargon
 - Get distracted from your goal
 - Speak down to your audience
- **Do**
 - Be specific
 - Simplify wherever possible
 - Keep your audience's needs/desires in mind
 - Maintain your passion

Questions About the Methods

- **Who is my audience?**
 - **What words/ideas won't they know?**
 - **What is essential to explain to them?**
- **How does my methodology fit into my discipline?**
 - **Am I using new methods? Standard methods? Passé methods?**
- **How expensive are my methods?**



How am I doing
what I'm doing?


Where am I?

Where am I going?

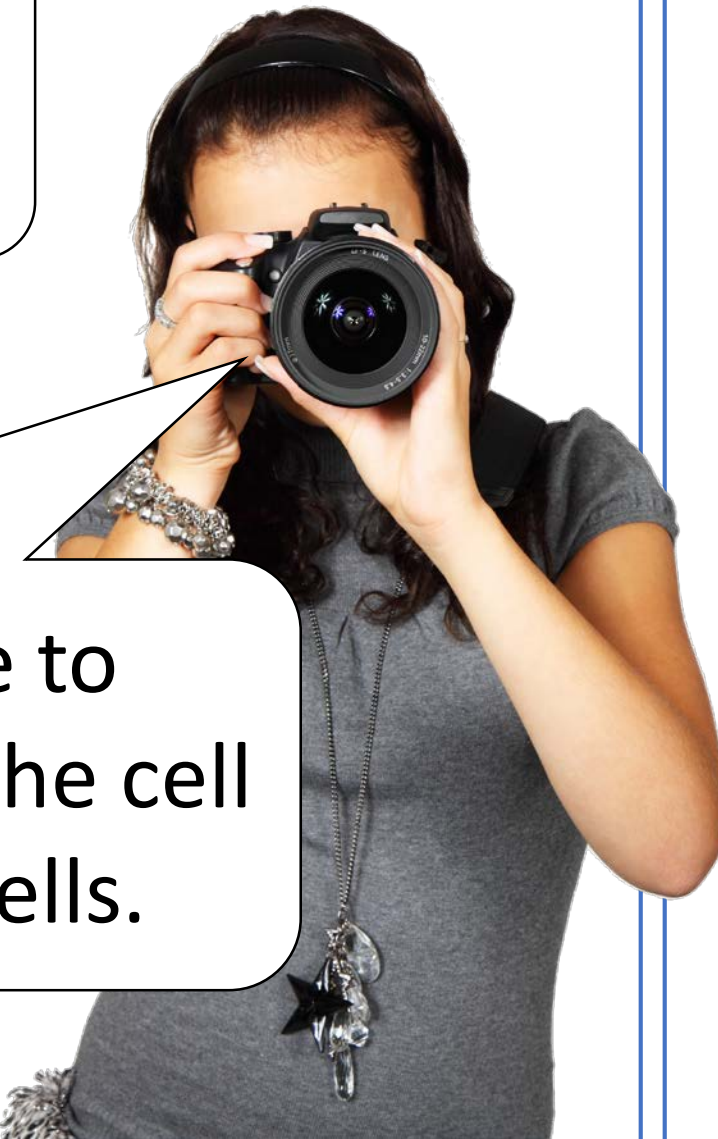


Where am I going?

Where am I going?



In the future, I would like to cure cancer.



In the future, I will to continue to develop therapies that interrupt the cell division process in cancerous cells.

Where am I going?

- **Showing the Future**

- This is what your theme is been working toward. You must communicate to them how you will succeed as a researcher.
 - Beware of being vague about the future. It shows you haven't thought seriously about what you want to do.
 - The future you describe should be in keeping with what the application institution is looking for. You may have to change your future view for different applications.
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Do's and Don't Do's of Showing the Future

- **Don't**
 - Be vague about the future plans
 - Overshoot what's possible in the future
 - Forget the limitations/desires of the institution
- **Do**
 - Be specific
 - Demonstrate you've given significant thought to your future
 - Demonstrate you understand the institution

Questions About the Future

- **What is the reasonable outcome of my research?**
- **How useful will my research be in the future?**
- **What are the potential benefits?**
 - **For my field?**
 - **For the institution/program I'm applying to?**
 - **For the world?**
- **What does my ideal future research work look like?**
- **What does the ideal future look like for the institution/program I'm applying for?**

General Guidelines

- **Possible sections: Introduction (not labelled), Past Research, Current Research, Future Research**
- **Writing is brief and well-organized**
- **Limited jargon**
- **Specific and concrete without being over-detailed**
- **Clean**
 - **Regular margins**
 - **Well-integrated visuals and graphs**
- **1-2 pages, 3 at most**
- **No exaggeration, hype, or lying**
- **Customized to the application**

More Resources

- **Materials presented today will be made available online**
 - gradschool.utah.edu/graduate-funding-success-workshops
- ***Science* Article: Writing a Research Plan**
 - <http://www.sciencemag.org/careers/2002/07/writing-research-plan>
- ***Academic Coaching & Writing* Article: Writing the Research Statement: How and Why You Research What You Do**
 - <https://www.academiccoachingandwriting.org>
- **The Writing Center**
 - <http://writingcenter.utah.edu/Gradstudentservices.php>