

NASA Earth and Space Science Fellowship (NESSF) Proposal

Jerome E. Mitchell
Indiana University
2013 CReSIS All-Hands

NASA Science Mission Goals and Purpose

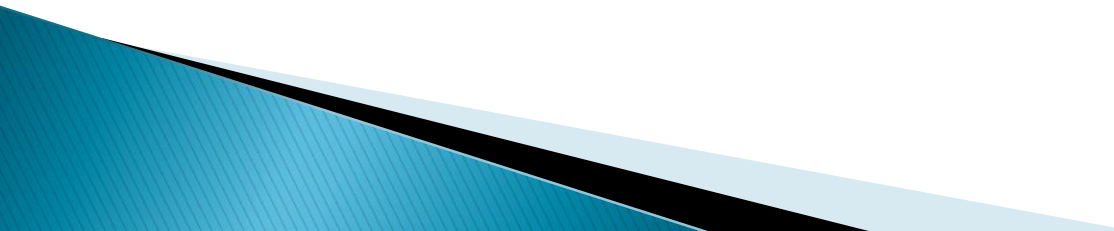
- ▶ Study Earth and space sciences in order to advance the scientific understanding and contribute to societal needs
- ▶ The purpose
 - is to ensure a continued training of a high qualified workforce in disciplines needed to achieve NASA's scientific goals.
- ▶ Awards are competitive and are chosen in the form of training grants to the respective universities with the advisor serving as the principal investigator.

Why Apply?

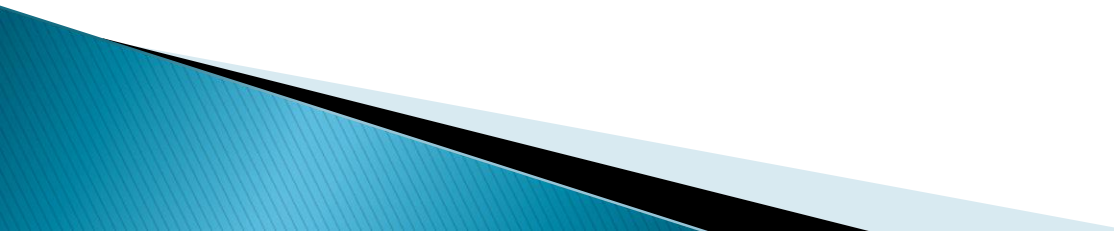
- ▶ \$24,000/year for THREE years as stipend – one of the best packages!
- ▶ All tuition paid
- ▶ Health insurance paid
- ▶ Prestigious
- ▶ Independence
- ▶ Opportunity to do research

All this to go to grad school, do some fun research, and get a degree!

Before You Write the Proposal

- ▶ Think about your target audience.
 - Who is the reviewer?
 - How will they review?
 - ▶ Your margin for sloppiness? – None!
 - Each reviewer will be evaluating several proposals.
 - ▶ Therefore, your proposal must be **TOP NOTCH!**
- 

How To Write a Proposal

- Abstract
 - Introduction
 - Relevance to NASA Objectives
 - Data and Models
 - Methodology
 - Summary
 - References
 - Timeline of Research/Academic Goals
- 

Abstract

Be concise and tell the entire story in a few words:

- Why is your project important?
- Why are you doing this project?
- What are the new methods and data?
- Who will benefit?

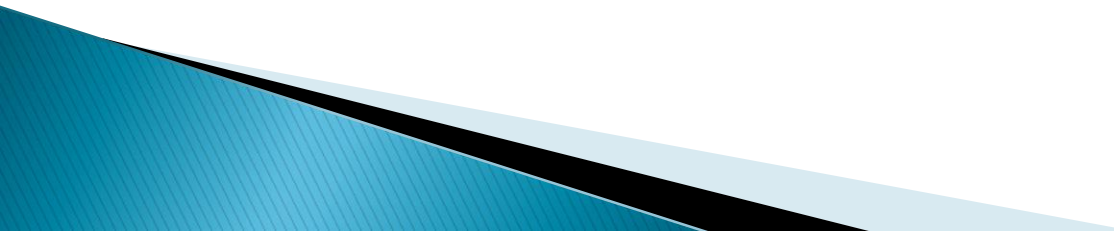
The abstract is the most important piece since it is the first thing that a reviewer will read.



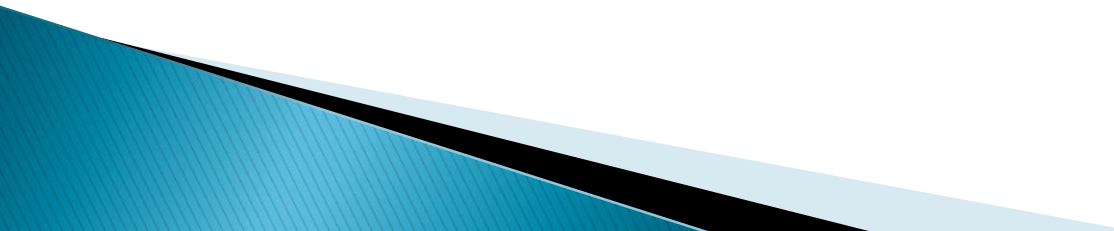
Introduction and Relevance to NASA Objectives

- ▶ Explain your reasoning for doing the project and show off your literature survey skills.
 - Be sure your references are relevant.
- ▶ Be specific
 - The specific objectives of this project are ...
- ▶ Cite and bold the objective and state how your proposal fulfills the objectives

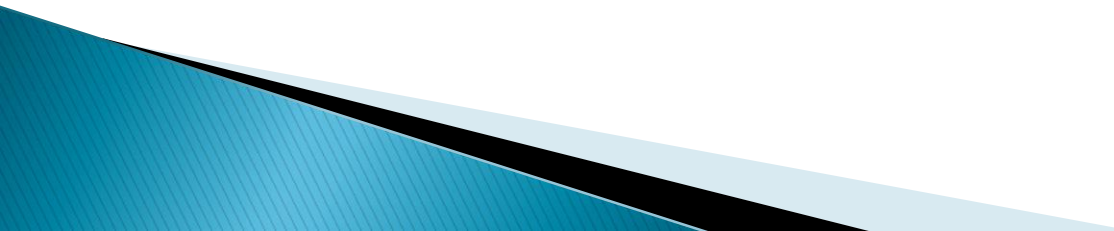
Data and Models

- ▶ If data is involved indicate study area, months/years of data, types of data, and uncertainties you know about.
 - ▶ Do not propose 10 year data analysis since the proposal is for 3 years.
 - ▶ Explain the model, grid sizes, and the advantages and disadvantages of the model.
 - ▶ Be upfront -> Let the reviewer know you have done your homework.
- 

Methods

- ▶ Be specific and to the point.
 - ▶ Map every objective clearly to methodology.
 - ▶ Talk about expected outcomes.
 - ▶ Address uncertainties and errors, clearly.
 - ▶ Include figures and preliminary results.
 - This signals the reviewer that you are indeed capable.
- 


Summary

- ▶ Provide a summary to remind the reviewer the high concepts.
 - ▶ Be sure you tell reviewers why this proposal is important and who would benefit from such work.
- 

Writing tips

- ▶ Only provide high quality, well labeled figures with descriptive captions.
- ▶ Spell check, grammar check – repeatedly
- ▶ Do not adjust font sizes and spacing. Follow the font and margin requirements for the proposal.
- ▶ Use a good font and be consistent. Make sure your font meets the guideline requirements.
- ▶ Proofread – over and over!
- ▶ Write in an exciting tone. Show your enthusiasm in your writing!
 - This means you need to start your proposal preparation as early as possible

Top Ten Do's for Proposal Writing

1. Carefully follow the instructions
 2. Focus the proposal on a single scientific problem describing the research plan and anticipated results.
 3. Provide judicious amounts of tutorial material, especially if proposing innovative work.
 4. Give credit to others as appropriate by including references to preceding work in the field.
 5. Proofread and spell check before submitting. If possible, have a peer/colleague proof the proposal.
- 

6. Keep the proposal text as short as possible without sacrificing completeness.
 7. Use clear, easy to read type fonts and page layouts of material.
 8. Include all requested information.
 9. Strive for realism and adequacy of the budget.
 10. Provide any and all material necessary to understand the budget.
- 