

Today's 'Field Trip' Option

ESS Seminar - 3:30-4:30 PM JHN 075

Slow glacial erosion and deep valley incision
in the Patagonian Andes

Presenter: Dr. Mark Brandon, Yale

Georgina R. Geoscientista
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 Seattle, WA 98122
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April 17, 2025

flush left to show below sig line.

make sure you have the name of a project manager to send this to not just a human resources person.

Janice Smartipants
 Senior Consultant
 SuperGeo Consultants
 5000 University Way
 Seattle, WA 98195

Dear Ms. Smartipants:

I am writing to apply for the geology intern position at SuperGeo Consultants. I will graduate with a B.S. in geology from the University of Washington in June, and I am eager to gain experience in geotechnical consulting. I believe my quantitative, field, and laboratory skills are an excellent match for this position.

Year 2025
space

My physics and GIS skills and experience in local stratigraphy and hazard assessment would be immediately valuable to your team. In geomechanics, seismology, and physics courses I developed strong problem solving skills and facility with Matlab. Course projects included slope stability and seismic hazard analysis in ArcGIS. I completed a 6-week field camp in Montana as well as stratigraphy exercises in the Seattle area. This combination of quantitative skills and field experience in a variety of rock types is well suited to SuperGeo's geotechnical projects in both eastern and western Washington.

try not to start each p why I, my, etc

many of my

environment, geological, hydrological, and

Don't limit to WA.

Today's Objectives

- Wrap-up Group Thesis exercise
- ***Proposals*** - writing and evaluating
- *In-class exercise: Review a NSF GRF proposal*
- **TO-Dos** for Tuesday, February 10
 - Prospectus first draft - submit to CANVAS + Bring 2 copies to class for peer review.

What makes a good thesis statement?

- **A thesis statement** is usually 1 or 2 sentence(s) near the end of your first paragraph that **presents your argument** to the reader.
- ***The thesis statement***
 - makes a **claim** that **others may dispute**.
 - is a **road map** for the paper
 - **Takes a stand** **justifies discussion**; expresses a **single, specific idea**.

Today's Objectives (2/5/15)

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Proposals

- **What are they? Why do we write them?**
 - ***Description*** and ***Plan*** for research project that ***requires approval*** and/or ***funding***
- *Proposals* are the formal and financially-minded equivalent to a *prospectus*

Proposals

- ***You will write one if you want to....***
 - Be a graduate student, professor, researcher, etc.
 - Work for a government agency
 - Develop a new project in the academic, public, or private sector
 - Have freedom to work on what uniquely interests YOU
 - Explore new frontiers in science research and/or policy

Proposals

- The **QUESTIONS** they must answer:
 - What are you going to do?
 - Why is the proposed work relevant/important?
 - Are you qualified to conduct the research? Do you have the resources to complete the project?
 - How much will the project **COST**?

Elements of a **GOOD** science proposal

- **Significance is clearly conveyed**
 - Answers the question, ‘so what?’
 - Will address fundamental questions and/or societal issues
- **Defines a *CLEAR* and *ANSWERABLE* question**
- **Provides a *detailed work plan***
- **Connects detailed study with broader goals/implications**

A GOOD proposal will convince the reviewer that the author is uniquely qualified to complete the project AND the money will be well-spent!

To write a **GOOD** proposal, you must:

State what you are proposing to do up front

- 1) **Explain significance**: *Context, background, big scale questions or societal issues that motivate proposed work*
- 2) **Define specific question**: *question to be addressed by proposed work must relate to (1)*
- 3) **Describe proposed work**: *what do you plan to do?*
- 4) **Connect proposed work / expected results** to specific questions you defined.
- 5) **Generalize results**: *Implications for the big-scale questions or issues that motivated the work*

KNOW your audience and what they KNOW

STRUCTURE of a proposal:

NSF example

PROJECT SUMMARY

- 1) **Background** (*big questions*)
- 2) **Proposed work** (*specific questions and objectives*)
- 3) **Details of research plan** (*including predicted results and their significance in addressing specific objectives/questions*)
- 4) **Proposed work plan** (*timeline*)
- 5) **Persuasive arguments** (*why am I uniquely qualified to do this work? What is the benefit of funding me?*)

BROADER IMPACTS

- 1) Separate section of the proposal
- 2) Discusses benefits of the project outside primary science aims

EVALUATION of a proposal:

NSF example → the *DETAILS*

What is the *intellectual merit* of the proposed activity?

- How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields?
- How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.)
- To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts?
- How well conceived and organized is the proposed activity?
- Is there sufficient access to resources?
- If international activities are proposed, are the proposed activities relevant and do they benefit the applicant?

What are the *broader impacts* of the proposed activity?

- How well does the activity advance discovery and understanding while promoting teaching, training, and learning?
- How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)?
- To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships?
- Will the results be disseminated broadly to enhance scientific and technological understanding?
- What may be the benefits of the proposed activity to society?

EVALUATION of a proposal: NSF example → the *BASICS*

INTELLECTUAL MERIT

- Importance, relevance and feasibility of proposed research
- Qualifications of the researcher(s)

BROADER IMPACTS

- How will research benefit the broader community/society?
- How will research help to grow the research community?

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END of class today: Mid-term course evaluations

In-class exercise: Review a NSF GRF proposal

- Read through the **successful(!)** NSF Graduate Research Fellowship proposal (3 years tuition coverage + \$32,000 annual stipend) and **evaluate:**

Intellectual Merit - *How did author...*

- (1) convey importance of the work?*
- (2) support feasibility of the project?*
- (3) convince of qualifications?*

Broader Impacts:

- (1) What are they?*
- (2) Why are they important?/How are they unique?*

STRUCTURE of a proposal: City of Fairview, OR example

City of Fairview
Request for Proposal (RFP)

HYDROGEOLOGICAL SERVICES FOR MUNICIPAL
GROUNDWATER SUPPLY

Proposals Due: 3rd July 2012

Submit Proposals To: City of Fairview
Attn: Linda Wood
1300 NE Village Street
Fairview, Oregon
97024

Direct Questions To: Allan Berry
Phone: (503) 674-6235
Email: berrya@ci.fairview.or.us

***20 pages of
instructions!***

STRUCTURE of a proposal:
City of Fairview, OR example

SECTION 5

PROPOSAL CONTENT AND FORMAT

A. FORMAT

To provide a degree of consistency in review of the written proposals, firms are requested to prepare their proposals in the standard format specified below.

1. **Title Page**

Proposer should identify the RFP subject, name and title of contact person, address, telephone number, fax number, email address and date of submission.

2. **Transmittal Letter**

The transmittal letter should be not more than two (2) pages long and should include as a minimum the following:

- a. A brief statement of the Proposer's understanding of the City's groundwater supply program and services to be performed;
- b. A positive commitment to perform the services within the time period established for each task; and the names of persons authorized to represent the Proposer, their title, address and telephone number (if different from the individual who signs the transmittal letter).

STRUCTURE of a proposal:

City of Fairview, OR example

4. Project Approach

Provide a summary of the firm's approach to similar services and how that approach would benefit the City of Fairview.

5. Project Experience

Describe the firm's experience in providing similar services to cities with comparable systems and issues. The respondent must have successfully provided services with similar complexity and nature to at least two (2) other municipalities. Discuss challenges, approaches taken to overcome those challenges and lessons learned.

6. Project Team Experience

Present qualifications for key personnel assigned to the project. Present a project manager with the depth and breadth of experience necessary to be the primary point of contact for the City as the hydrogeologist providing services. The proposed project manager must be locally-based and hold the relevant registrations in Oregon. This section also should list other key individuals and their relevant qualifications and experience for providing the requested services. The level of commitment of each individual must be clearly indicated in this section. The proposed project team also must include a certified water rights examiner (CWRE) in the state of Oregon.

7. Rates

Present fully loaded billing rates for individuals assigned to the project and for other team members. A consumer price index (CPI) adjustment will be allowed for each grade level for each year of the contract.

And other stuff too...

**PROPOSAL EVALUATION
PROCEDURES**

A rubric!

A. SELECTION AND EVALUATION PROCESS

A Selection Committee assembled by the City will review the written proposals. Proposals will be evaluated to determine which ones best meet the needs of the City. After meeting the mandatory requirements, the proposals will be evaluated on both their technical aspects. The Selection Committee will select the engineering firm which best meets the City's needs based upon its evaluation of a firms proposal. Proposals will be evaluated in accordance with the following:

- | | |
|---|-----------|
| 1. Completed Proposal submitted on time | Pass/Fail |
| 2. An original plus three (3) copies of the complete proposal | Pass/Fail |
| 3. Transmittal letter | Pass/Fail |
| 4. Project approach | 10 points |
| 5. Project experience | 30 points |
| 6. Project Team experience | 30 points |
| 7. Rates | 10 points |
| 8. References | 20 points |

Total Evaluation Points

100 points

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the *Prospectus*: what YOU need to do

- **(1) Title** of your topic
- **(2) Introduction (complete draft!)** → Background info/motivation and thesis statement
- **(3) Body** – evidence in support of thesis and counter arguments with prospective references
- **(4) List of references cited**

What is working for you in this class?

Do you have any concerns or suggestions?