

CSCI2950-C: Fall 2011. Project Proposal

<http://www.cs.brown.edu/courses/csci2950-c/Fall2011>

For the project proposal, we will use the format of an NIH grant application.

Deadline

Initial proposal: Wednesday, Nov. 9 via email. [Specific Aims and Significance]

Final proposal: Friday, Dec. 16. [All parts.]

Format

The final proposal will have 5 sections, with approximate lengths below.

The sections are:

- 1) Specific Aims: ~ ½ page.
- 2) Significance: ~ ½ – 1 page.
- 3) Innovation: ~ ½ - 1 page.
- 4) Approach: This part will be only a brief overview of what you will do in your project, and will be further updated in the final report.
- 5) References Cited: Work cited in parts 1-4.

The NIH instructions for these sections are below. Please use these to guide how you write each section. It is not necessary to address every bullet point.

The specific aims should be formatted as a numerical list of “action” sentences, each in bold type, and each followed by a few sentences of further description. For example:

Aim 1: Develop robust, scalable, and general computational methods for identification of structural variants in individual genomes and comparison of structural variants across individuals using various DNA sequencing technologies.
[Additional sentences of description]

NIH Instructions

The following text is from the instructions for NIH proposals (June 2009 revision, <http://grants.nih.gov/grants/funding/phs398/phs398.pdf>)

5.5.2 Specific Aims

State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved.

List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.

5.5.3 Research Strategy

Organize the Research Strategy in the specified order and using the instructions provided below. Start each section with the appropriate section heading—Significance, Innovation, Approach. Cite published experimental details in the Research Strategy section and provide the full reference in the Bibliography and References Cited section (item 5.5.5).

Follow the page limits for the Research Strategy in the Table of Page Limits, unless specified otherwise in the FOA.

(a) Significance

- Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses.
- Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

(b) Innovation

- Explain how the application challenges and seeks to shift current research or clinical practice paradigms.
- Describe any novel theoretical concepts, approaches or methodologies, instrumentation or intervention(s) to be developed or used, and any advantage over existing methodologies, instrumentation or intervention(s).
- Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation or interventions.

(c) Approach

- Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project. Unless addressed separately in Item 5.5.15, include how the data will be collected, analyzed, and interpreted as well as any resource sharing plans as appropriate.
- Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
- If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high risk aspects of the proposed work.
- Point out any procedures, situations, or materials that may be hazardous to personnel and precautions to be exercised. A full discussion on the use of Select Agents should appear in 5.5.11 below.