NSERC Discovery Grant Evaluation Group Roundtable Discussion

SPARC Information Session

September 12, 2016

Topics of Discussion

- Full Application
- Evaluation Groups
- Discovery Grant Selection Criteria
- Important Deadlines
- Panel Discussion

Full Application Format

Sections	Format and Limits	Complementary Information in NSERC CCV
Summary of Proposal	Max. 2500 characters entered into text box in Research Portal	
Proposal	5 pages PDF attachment	
HQP Training Plan	Max. 5000 characters entered into text box in Research Portal	
Past Contributions to HQP	Max. 2500 characters entered into text box in Research Portal	
Additional Information on Contributions	Max. 2500 characters (to discuss order of authors, role, venues) entered into text box in Research Portal	
Budget Justification	2 pages PDF attachment	

Full Application Format

Sections	Format and Limits	Complementary Information in NSERC CCV
Relationship to Other Source of Support (explanation)	Max. 10000 characters entered into text box in Research Portal	✓
Relationship to Other Source of Support (supporting documents)	No page limit—one PDF of scanned pages from other applications and grants	✓
Most Significant Contributions	Max. 7500 characters entered into text box in Research Portal	✓
Samples of Contributions	4 separate PDF attachments	
List of References	2 pages PDF attachment	

Completing the application: Summary of Proposal

- Provide a summary of your research proposal in lay language.
  - Describe the nature of the research—goal and objectives
  - Why is the research important?
  - What are the anticipated outcomes?
  - How will your research field and Canada benefit?

Relationship to Other Research Support

- Explain relationship and overlap (conceptual or budgetary) with this application and other funding sources you have requested or secured.
  - Other NSERC grants
  - CIHR
  - SSHRC
  - CRC

Reference material in your CCV

Highly Qualified Personnel (HQP) Training Plan

How are the research program and its anticipated objectives appropriate for HQP training? How do the training plans relate to the research program and involvement of trainees in individual objectives?

- Ranges from undergraduate to PDF, includes technical and research personnel
- Describe the projects that are appropriate and involvement of the trainee; e.g. objective 1, will do X in year 1
- Will the trainees be able to make an original contribution?
- Is there an opportunity for training in collaborative or interdisciplinary research?
- Explain expected outcomes – future contribution to knowledge, training value of proposed projects
- Provide opportunities for interaction with other researchers inside and outside UBC
- Include in meetings, presentations at conferences, publications
- Recommended to include in project management and other interpersonal/team events

Past Contributions to HQP Training

Clarify your contributions to training of HQP over the **last six years**. Training supported by NSERC ranges from undergraduate theses and summer projects to postdoctoral levels, and includes technical and other research personnel

- Should discuss contributions to training (summary of students), training in particularly important or challenging areas of research, specialized methodologies/techniques, industrial collaborations, interdisciplinary collaborations, as well as any lack of recent contribution to training
- Discuss role in co-supervision of HQP (e.g., interdisciplinary)
- Have students gone on to further research training/professionals in fields related to NSE? Are any students in noteworthy/influential positions?
- Did students start a new business, create jobs?
- Did the students develop new policy, standards, regulations?
- Did the students receive prestigious fellowships?

Reference material in your CCV

Most Significant Contributions to Research

List up to five of your most significant contributions to research and/or to practical applications over the last **six years**. Contributions made more than six years ago but for which the impact is being felt now (e.g., exploitation of patent, inclusion in a code, etc.) may be included.

For each contribution, describe its significance in terms of influence on the direction of thought and activity in the target community; and significance to, and use by, other researchers and end users. For collaborative contributions, describe your role.

A contribution does not have to be a single publication or report. For example, a group of publications on a specific subject could be discussed as one contribution.

- Describe the significance – influence, target community
- Create a story – example – created a novel computing system resulting in three publications (1, 2 and 3) and a patent filing (A1…) that led to an exclusive licensing agreement with a Canadian company

You may include the full reference to your contributions in this text box or provide the appropriate reference to your NSERC CCV.

Additional Information on Contributions

Provide an explanation, as appropriate, concerning the contributions listed in your NSERC CCV. Such details may include:

- the **nature of collaborations with other researchers**;
- the rationale or practice used for:
  - the order of authors in the publications listed, and
  - the inclusion of students in the list of authors;
- your role in joint publications;
- **the reason for selecting certain venues (journals, conferences) for publications** and particular features of the venues (e.g., target audiences, review procedures);
- the impact or potential impact of patents and technology transfer;
- the nature of industrially relevant R&D activities;
- the **significance of technical reports**;
- attestation to the nature and the significance of confidential technical and internal reports; and
- original research reported in books or technical reports.

You may include other activities or information to help committees to evaluate your contributions to and impact on science and engineering, including interdisciplinary research.

Reference material in your CCV

Proposal

Limit of five pages in a free form document. Images and graphics can be included but count towards the page limit.

- Suggested section headings
  - Recent Progress
  - Objectives
  - Literature Review
  - Methodology
  - Impact

Proposal: Recent Progress

Describe your recent progress in research activities related to the proposal and, in addition for renewals, the progress attributable to your previous Discovery Grant.

Proposal: Objectives

Define the short- and long-term objectives of your research program.

A research program should have a long-term vision that expands beyond the five years of the Discovery Grant. A single, short-term project does not constitute a research program.

- Include defined roles for students

Proposal: Literature Review

Discuss the literature pertinent to the proposal, placing the proposed research in the context of the state of the art.

- Why is the research required?
- Example – require an environmentally friendly method to clean up polluted rivers
- Currently – X number of rivers polluted in Canada; cost to productivity, economy, etc.
- SWOT analysis of who is doing what?

Proposal: Methodology

Describe the methods and proposed approach, providing sufficient details to allow the reviewers to assess the feasibility of the research activities.

Proposal: Impact

Explain the anticipated significance of the work.

- Groundbreaking advances
- Leading to a technology/policy that addresses socio-economic or environmental needs
- Impacts:
  - Research Community
  - Local / National Community
  - Training of the next generation of employees/leaders

Budget Justification

- Provide a detailed explanation and justification for each budget item identified in the Proposed Expenditures page.

- Provide sufficient information to allow reviewers to assess whether the resources requested are appropriate.

Other Supporting Sources

- Attach a summary and budget page for any currently held or applied for CIHR & SSHRC grant.

Samples of Research Contributions

A maximum of four samples of research contributions from the **last six years**. The samples of contributions will be used by reviewers to assess the quality of your work.

These documents should be chosen to represent your most significant and recent contributions, or those most relevant to the proposed work.

Contributions include :

-Reprints

-Preprints

-Manuscripts

-Theses

-Technical reports

List of References

- Provide a list of literature references in support of your proposal.
- Do not refer readers to Web sites for additional information on your proposal.
- Do not introduce hyperlinks in your list of references.

DG Evaluation Groups

Each Evaluation Group (EG) represents an assembly of content experts across the spectrum of a discipline. They provide quality assessment and funding recommendations of DG applications.

1501 – Genes, Cells and Molecules	1507 – Computer Science
1502 – Biological Systems and Functions	1508 – Mathematics and Statistics
1503 – Evolution and Ecology	1509 – Civil, Industrial and Systems Engineering
1504 – Chemistry	1510 – Electrical and Computer Engineering
1505 – Physics	1511 – Materials and Chemical Engineering
1506 – Geosciences	1512 – Mechanical Engineering

The members of each Evaluation Group can be found on NSERC's website (http://www.nserc-crsng.gc.ca/NSERC-CRSNG/committees-comites/programs-programmes_eng.asp)

Evaluation of Applications

- Assessed on three selection criteria:
  1. Scientific or engineering excellence of the researcher;
  2. Merit of the proposal; and
  3. Contributions to the training of highly qualified personnel (HQP)
- Assessed on the relative cost of research

Read Section 4 of the NSERC Peer Review Manual for evaluation instructions

Selection Criteria: 1. Scientific or Engineering Excellence of the Researcher

- Stature in the field
- Research accomplishments
- Quality and impact of contributions
- Collaborative work
- Impact of advancing knowledge

Selection Criteria: 2. Merit of the Proposal

- Originality and innovation
- Significance and expected contributions
- Clarity and scope of objectives
- Clarity and appropriateness of methodology
- Feasibility
- Relevance
- Relationship with other sources of funding

Selection Criteria: 3. Contributions to the Training of HQP

- Quality and impact of past contributions to training of HQP during the last six years
- Quality of expected training of HQP
  - Needs to be highly relevant to NSE
- Appropriateness of proposal for training of HQP

Discovery Grant Merit Indicators

DISCOVERY GRANTS MERIT INDICATORS[1]

	Exceptional	Outstanding	Very Strong	Strong	Moderate	Insufficient
Excellence of the Researcher	Acknowledged as a **leader** who has continued to make, over the last six years, **influential accomplishments** at the highest level of quality, impact and/or importance to a **broad community**.	The accomplishments presented in the application were deemed to be **far superior** in quality, impact and/or importance to a **broad community**.	The accomplishments presented in the application were deemed to be of **superior** quality, impact and/or importance.	The accomplishments presented in the application were deemed to be **solid** in their quality, impact and/or importance.	The accomplishments presented in the application were deemed to be of **reasonable** quality, impact and/or importance.	The accomplishments presented in the application were deemed to be **below an acceptable level** of quality, impact and/or importance.
Merit of the Proposal	Proposed research program is clearly presented, is **extremely original and innovative** and is **likely to have impact by leading to groundbreaking advances** in the area and/or **leading to a technology or policy** that addresses socio-economic or environmental needs. **Long-term vision** and **short-term objectives** are **clearly defined**. The methodology is **clearly defined and appropriate**. The proposal and budget **clearly demonstrate** how the research activities to be supported are distinct from and complement those funded by other sources.	Proposed research program is clearly presented, is **highly original and innovative** and is **likely to have impact by contributing to groundbreaking advances** in the area, and/or **leading to a technology or policy** that addresses socio-economic or environmental needs. **Long-term goals are clearly defined and short-term objectives are well planned**. The methodology is **clearly described and appropriate**. The proposal and budget **clearly demonstrate** how the research activities to be supported are distinct from and complement those funded by other sources.	Proposed research program is clearly presented, is **original and innovative** and **is likely to have impact by leading to advancements** and/or addressing socio-economic or environmental needs. **Long- term goals are defined and short-term objectives are planned**. The methodology is **clearly described and appropriate**. The proposal and budget **demonstrate** how the research activities to be supported are distinct from and complement those funded by other sources.	Proposed research program is clearly presented, is **original and innovative** and is **likely to have impact** and/or address socio-economic or environmental needs. **Long-term goals and short-term objectives are clearly described**. The methodology is **described and appropriate**. The proposal and budget **demonstrate** how the research activities to be supported are distinct from and complement those funded by other sources.	Proposed research program is clearly presented, has **original and innovative aspects** and **may have impact** and/or address socio-economic or environmental needs. **Long-term and short- term objectives are described**. The methodology is **partially described and/or appropriate**. The proposal and budget somewhat **demonstrate** how the research activities to be supported are distinct from and complement those funded by other sources.	Proposed research program, as presented **lacks clarity**, and/or is of **limited originality and innovation**. **Objectives are not clearly described** and/or likely not attainable. Methodology is **not clearly described and/or appropriate**. The proposal and budget **do not clearly demonstrate** how the research activities to be supported are distinct from and complement those funded by other sources.
Training of HQP	Training record is **at the highest level**, with HQP contributing **to top quality research**. **Most** HQP move on to positions that require **highly desired skills**, obtained through training received. Research plans for trainees are **appropriate and clearly defined**. HQP **success highly likely**.	Training record is **far superior** to other applicants, with HQP contributing to high-**quality research**. **Most** HQP move on to positions that require **highly desired skills**, obtained through training received. Research plans for trainees are **appropriate and clearly defined**. HQP **success highly likely**.	Training record is **superior** to other applicants, with HQP contributing to **quality, original research**. **Many** HQP move on to appropriate positions that require **desired skills**, obtained through training received. Research plans for trainees are **appropriate and clearly described**. HQP success **is likely**.	Training record compares **favourably** with other applicants. HQP **generally** move on to positions that require **desired skills**, obtained through training received. Research plans for trainees are **appropriate and described**. HQP **success is likely**.	Training record is acceptable but may be modest relative to other applicants. **Some** HQP move on to programs or positions that require **desired skills**, obtained through training received. Plans for trainees are **described** and **should contribute to HQP success**.	Training record is **below an acceptable level** relative to other applicants. HQP do not, in general, move on to positions that require skills obtained through training received. Plans for trainees are **not appropriate** or are **not described** with enough **information to predict likelihood of HQP success**.

[1]The Discovery Grants Merit Indicators should be used in conjunction with the Peer Review Manual (Chapter 6) which outlines how reviewers arrive at a rating.

Cost of research	High	Normal	Low
	Majority of justified expenses represent costs **higher than the norm** for the research area.	Majority of justified expenses are within the **norm** for the research area.	Majority of justified expenses are **lower than the norm** for the research area.

[2] Possible examples include: Cost of training of HQP; Equipment intensive research and/or high users fees; particularly expensive or frequent consumables; Travel (for collaborations, field work, access to facilities, conferences, …)

Important Deadlines

- ORS Signature Deadline
  - Signed RPIF and Discovery Grant
    - Summary of Proposal, Activity Details, Proposed Expenditures and Budget Justification.
  - 4:30PM (PST) Tuesday, October 25, 2016
- NSERC Submission Deadline
  - 5:00PM (PST) Tuesday, November 1, 2016

Contact Us

- Alexander Unterberger

  NSE Research Development Officer

  alexander.unterberger@ubc.ca 604-822-5386

- Joanne Moszynski

  NSE Research Development Officer

  joanne.moszynski@ubc.ca 604-827-4057

- Tim Salcudean

  UBC NSE Research Advisor

  tims@ece.ubc.ca 604-822-3243

Panel Discussion

- Dr. James Kronstad
  - Director, Michael Smith Laboratories
  - 1501 Genes, Cells and Molecules
- Dr. David Kitts
  - Associate Dean, Research, Faculty of Land and Food Systems
  - 1502 Biological Systems and Functions
- Dr. Jeannette Whitton
  - Associate Professor, Department of Botany
  - 1503 Evolution and Ecology
- Dr. Joerg Rottler
  - Associate Professor, Department of Physics and Astronomy
  - 1505 Physics
- Dr. Michiel van de Panne
  - Professor, Department of Computer Science
  - 1507 Computer Science
- Dr. Donald Mavinic
  - Professor, Department of Civil Engineering
  - 1509 Civil, Industrial and Systems Engineering
- Dr. Reza Vaziri
  - Professor, Department of Civil Engineering
  - 1512 Mechanical Engineering