

**PEGASUS  
NSERC  
Workshop**

For physics students, by physics students.

# Motivation

- Communicate available opportunities for research funding
- Offer support and advice on how to best write proposals

# Tri-Council Awards

- (I)USRA - (Industrial) Undergraduate Student Research Awards
- C/PGS M: Alexander Graham Bell Canada Graduate Scholarships
- IPS - Industrial Postgraduate Scholarship
- C/PGS D: A.G.B. Canada Grad. Schools. and NSERC Postgraduate Schools
- Vanier Canada Graduate Scholarships Program

# Available opportunities

## (I)USRA: Undergraduate Student Research Awards

- \$4500 + at least 25% extra from institution
- 16 weeks
- Maximum of one per fiscal year
- Maximum of three per life
- Must be done 1st year
- No higher degrees started/held in nat. sci. /eng.
- Second class (B,B- or better) overall

# Available opportunities

C/PGS M: Alexander Graham Bell Canada Graduate Scholarships - Master's Program

- \$17500 for 1 year, NO renewal/extension
- Also for direct-to-PhD students
- Must have done  $\leq$  12 months of program
- Must have significant research component
- Eligible Canadian universities only
- 50% academics, 30% research ability/pot'l, 20% personal (leadership, &c.)
- Need 1st class (A- or better) in last 2 years

# Available opportunities

## Industrial Postgraduate Scholarship

- \$15,000 per year + at least \$6,000 extra per year from industry partner for 2 years (MSc. IPS 1) or 3 years (PhD IPS 2)
- At least 50 days per year must be spent at industry partner site
- Eligible Canadian universities only
- Need 1st class (A- or better) in last 2 years
- Very high success rate for applications

# Available opportunities

C/PGS D: A.G.B. Canada Grad. Schools. and NSERC Postgraduate Schools. - Doctoral

- C: \$35000/year, P: \$21000/year
- 2-3 years (max. of 2 for some cases)
- Must have done <24 mo. of doctorate, or 4-36 mo. of direct-to-doctorate
- Must hold nat. sci./eng. degree from elig. uni
- Need 1st class (A- or better) in last 2 years
- C Canada only, P anywhere elig.
- 30% acad., 50% research, 20% personal

# Available opportunities

## Vanier Canada Graduate Scholarships Program

- \$50,000 per year for 3 years, doctorate only
- Requires nomination process
  - Inform CGSR of intent to apply
  - University nomination
- University must be allocated Vanier funding
- Academic excellence (awards, etc.)
- Research potential (past/present/future)
- Leadership ability/qualities important



# **Graduate Studies Path**

# Graduate studies career path

- First be a summer student
  - Research experience, publications, posters, conferences
- Apply for Master's funding
- Apply for PhD funding
- Maintain high academic average > 85%
- Volunteer, join clubs, have hobbies
  - Demonstrate self motivation, ability to learn, leadership abilities
- Find potential supervisors

# Finding your supervisor

- In your field of interest
- Actively seeking students
- Willing to help you pick out a project
- Applications are a team effort!
- Must have NSERC funding of their own, or meet NSERC criteria, for you to be allowed to get NSERC funding while studying with them

**Choose wisely!**

# The Proposal

# **NSERC Criteria (USRA)**

Easy for a student to apply! No reason not to try!

## **Outline of Proposed Research**

- **Form 202 Parts 1 and 2**
- **Part 1 filled out by student**
  - Personal info, addresses, academic background, awards, and transcripts
- **Part 2 filled out by research supervisor**
  - Provide a description of the proposed research project.
  - Description of students role in the outlined research

# **NSERC Criteria (IUSRA)**

Easy for a student to apply! No reason not to try!

## Outline of Proposed Research

- Same as USRA
- If the industry partner is applying for this award for the first time in the past 3 years, they must fill out Form 183B from the NSERC website and submit it before your application can be submitted

# **NSERC Criteria (CGS-M)**

- Significance, feasibility, and merit of proposed research is part of the 30% “Research Potential” application criteria
- Presentation standards (Important!)
- Only one page for proposal, one page for references
- References/Letters of Support (2), very important!

# NSERC Criteria (CGS-M)

## Outline of Proposed Research

- **Detailed** description of research project
- Background information required
- Objectives/Hypothesis
- Outline approach taken
- Cite as necessary
- State significance of research



# **NSERC Criteria (PGS-/CGS-D)**

- Significance, feasibility, and merit of proposed research is part of the 50% “Research Potential” application criteria
- Presentation standards (Important!)
- Quality, significance, relevance, critical thinking, judgement, originality, initiative, enthusiasm, determination
- Contributions to Research and Development
- Reports on the Applicant (2), very important!

# NSERC Criteria (IPS)

- Same as PGS/CGS-D
- Need to fill out an Intellectual Property Agreement (**very important**) 3 original copies signed by all parties involved
- Letter from proposed industrial partner outlining proposed work

# Relevance of Research

- Meeting Criteria is necessary but not sufficient
- Organization of the proposal must demonstrate the need and relevance of the research to Canada
- Why should the country invest in your research?

# Example Template

- Explain existing body of research (can contribute to relevance argument)
- Describe the current lack of understanding and why is it an important problem
- How will your research address the issue?
- How is your approach novel?
- Specifics of the approach
- Relevance of the project to Canada

# **Smolyakov's Advice**

# Useful contacts

- Heather Lukey
  - Director of Graduate Awards and Scholarships
- Tom Steele
  - Department head of Physics and Engineering Physics
- Andrei Smolyakov
  - Current Graduate Chair
- Sasha Koustov
  - Former Graduate Chair

# Online tutorial: How to use NSERC's online application system.

- USRA

- [http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/Index\\_eng.asp](http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/Index_eng.asp)

- CGS-M

- [http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Index\\_eng.asp](http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Index_eng.asp)

- PGS-/CGS-D

- [http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/Index\\_eng.asp](http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/Index_eng.asp)

# Useful links

- <http://www.usask.ca/ulc/workshops>
  - An introduction to writing NSERC proposals
  - Funding searches: Funding beyond the tri-council
- <http://physics.usask.ca/>
- <http://www.usask.ca/cgsr/funding/canadian.php>
  - Canadian funding available according to CGSR
- <http://pegasusask.ca/>
  - Where to find this presentation



# NSERC Links

- USRA Info

- [http://www.nserc-crsng.gc.ca/Students-Etudiants/UG-PC/USRA-BRPC\\_eng.asp](http://www.nserc-crsng.gc.ca/Students-Etudiants/UG-PC/USRA-BRPC_eng.asp)

- CGS-M Info

- [http://www.nserc-crsng.gc.ca/Students-Etudiants/PG-CS/CGSM-BESCM\\_eng.asp](http://www.nserc-crsng.gc.ca/Students-Etudiants/PG-CS/CGSM-BESCM_eng.asp)

- PGS-/CGS-D Info

- [http://www.nserc-crsng.gc.ca/students-etudiants/pg-cs/bellandpostgrad-belletsuperieures\\_eng.asp](http://www.nserc-crsng.gc.ca/students-etudiants/pg-cs/bellandpostgrad-belletsuperieures_eng.asp)

- Vanier

- [http://www.nserc-crsng.gc.ca/Students-Etudiants/PG-CS/VanierCGS-VanierBESC\\_eng.asp](http://www.nserc-crsng.gc.ca/Students-Etudiants/PG-CS/VanierCGS-VanierBESC_eng.asp)

# NSERC Instructions

- USRA

- <http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/instructions/202/e.asp>

- CGS-M

- [http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Instructions-Instructions/CGS\\_M-BESC\\_M\\_eng.asp](http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Instructions-Instructions/CGS_M-BESC_M_eng.asp)

- PGS-/CGS-D

- [http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/Forms-Formulaires\\_eng.asp](http://www.nserc-crsng.gc.ca/OnlineServices-ServicesEnLigne/Forms-Formulaires_eng.asp)

- Vanier

- <http://www.vanier.gc.ca/eng/home-accueil.html>

# Aside: where does funding come from?

- NSERC pays the university, which then pays you. It comes from federal money.
- In the case of the USRA, NSERC directly provides at most  $\frac{4}{5}$  of the money you get, and the rest comes from the department or your supervisor's own (NSERC) funding
- In the other cases (C/PGS) the full scholarship comes from NSERC
- Important note: make sure your research is right for NSERC, or pick another council!

# Aside: where does funding come from?

- If you don't get NSERC funding, you may still get a scholarship from the university/department, but it will likely be smaller, and your supervisor will **PROBABLY** provide you with some money from their own funding
- If you get no scholarship at all, your supervisor will **POSSIBLY** pay your full salary, but in either case you'll likely get less than the amount of the NSERC scholarship
- Don't forget, there are other sources too