A Few Resources

• MITACS  www.mitacs.ca
  – Accelerate: four month internships
  – Step: regular workshops on soft skills

• Fields Institute  www.fields.utoronto.ca
  – Workshops and conferences
  – Industrial problem solving workshops (spring, summer)

• Ontario Institute for Cancer Research
  – Biostatistics Training Initiative (webinars)
  – http://oicr.on.ca/education/bti
Put your talent to work with an organization that needs it. Funding starts at $15,000.

HOW IT WORKS

1. The match

A grad student, a supervising professor, and a partner organization develop a research project

2. The proposal

Applicants submit a proposal via a Mitacs representative

3. The project

Projects receive $15,000 in funding for each four-month internship
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Title</th>
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<tbody>
<tr>
<td>October 3 - 7, 2016</td>
<td>Workshop on Convexity in Algebraic Geometry</td>
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<td>October 13 - 16, 2016</td>
<td>52nd Annual Canadian Undergraduate Physics Conference (CUPC)</td>
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<tr>
<td>October 24 - 26, 2016</td>
<td>25th International Genetic Epidemiology Society Meeting (IGES)</td>
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<tr>
<td>November 1 - 4, 2016</td>
<td>2016 Fields Medal Symposium</td>
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<td>November 2, 2016</td>
<td><strong>Student Night of the 2016 Fields Medal Symposium</strong></td>
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<td>November 7 - 10, 2016</td>
<td>Short Course on Data Science Tools for Finance</td>
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<td>November 10, 2016</td>
<td>Fields Institute Innovation Day</td>
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<tr>
<td>November 11 - 12, 2016</td>
<td>New Challenges for Big Data in Economics and Finance Conference</td>
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<tr>
<td>November 14 - 18, 2016</td>
<td>Workshop on Hall Algebras, Enumerative Invariants and Gauge Theories</td>
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<tr>
<td>December 5 - 9, 2016</td>
<td>Workshop on Combinatorial Moduli Spaces and Intersection Theory</td>
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Biostatistics Training Initiative

Leaders

Dr. Richard Cook, University of Waterloo
Dr. Gregory Pond, McMaster University

Background

Recent technological advances have led to far more complex and much larger datasets in cancer research. There is a critical need for biostatisticians who can work with these data, ensuring they can be used to inform on the next generation of cancer treatments. Since 2010, the Biostatistics Training Initiative (BTI), previously known as the Oncology Research Training and Methods Program (ORTMP), has placed Master’s students from the University of
A Few Resources

• Writing
  – Davison, Gessner, Titterington (2008)
  – some notes on *Biometrika* style

• Classroom
  – *What can I do today to create a more inclusive community in CS?*

• Reproducible research
  – *Good enough practices in scientific computing*

• \beamertemplate navigation symbol empty
What can I do today to create a more inclusive community in CS?

Start of Term:

- At the beginning of the quarter, ask each student to email you to introduce themselves by naming one of their core values, and one way that CS relates to or could be used in service of that core value (or write it down in class, and/or share with a neighbor in class). [1]

Mid-Term:

- Email top performers on a recent homework or exam to congratulate them; be sure to include a diverse group.
- Provide students with clear and timely feedback, including class-wide distribution data. Women and minority students often fear the worst about their position relative to the class and can be reassured by data. [2]
- After a midterm exam, step through the math showing the class that students can still pass the course even if they did poorly. It’s just some multiplication, but take the time to talk about it. Be factual—no need to “sugar coat”—but provide facts that will help reassure students who think things are worse than they really are.
- Reach out to students who have filed a disability accommodation form with you and ask them if their needs are being met in your class. Reaffirm your commitment to complying with their approved accommodations and your willingness to receive complaints if there is a problem.

End of Term:

- Personally invite a woman or a minority student who did well in your class to major in CS, apply to an internship, or go to grad school. If your TAs work with small groups of students in a discussion section, have them do this as well. [3]

Any Lecture Day:

- Review today’s lecture slides to make sure that your slides are free from gendered pronouns, especially those used in ways that conform to stereotype. Use of “they” (and their/them) as a singular pronoun is now widely...
Some notes on Biometrika style

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mike@stats.gla.ac.uk

SUMMARY

There must be a single paragraph summary which should not contain formulae or symbols,
followed by some key words in alphabetical order. Typically there are 3–8 key words, which
should be singular rather than plural. The summary contains bibliographic references only if they
are essential. It should indicate results rather than describe the contents of the paper: for example,
‘A simulation study is performed’ should be replaced by a more informative phrase such as
‘Simulation shows that our estimator has smaller mean square error than its main competitors.’
Good Enough Practices in Scientific Computing

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Lex Nederbragt⁵,¶, Tracy K. Teal⁶,¶
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† These authors contributed equally to this work.
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Abstract

We present a set of computing tools and techniques that every researcher can and
should adopt. These recommendations synthesize inspiration from our own work, from
the experiences of the thousands of people who have taken part in Software Carpentry
and Data Carpentry workshops over the past six years, and from a variety of other
The Canadian Statistical Sciences Institute
Institut canadien des sciences statistiques

Data. Discoveries. Decisions
CANSSI Activities

- Workshops, summer schools and conferences
- Postdoctoral fellowships and internships
- Collaboration on thematic programs
  - Big Data: Fields 2015
  - Risk in Complex Systems: CRM 2017
- Collaborative Research Team projects
  - national in scope
  - interdisciplinary collaborations and partnerships
CANSSI Activities

• Industrial Innovation Platform
  – Industrial Problem Solving Workshops
• Distinguished Visitor Program
• Distinguished Lecture Series in Statistics
  – Fields Institute, U Toronto  Don Rubin, Nov.
• ASA DataFest Support
• KickStart Collaborative Program
• MILA Summer School in Deep Learning (Montreal)

https://sites.google.com/site/deeplearningsummerschool2016/home
# CANSSI Collaborative Research Team Projects

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<tr>
<td>Copula Dependence Modeling: Theory and Applications</td>
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<tr>
<td>Computer and Physical Models in Earth, Ocean and Atmospheric Sciences</td>
<td><img src="image3.png" alt="Computer and Physical Models Image" /></td>
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<td>Evolving Marked Point Processes with Application to Wild Land Fire Regime Modeling</td>
<td><img src="image4.png" alt="Evolving Marked Point Processes Image" /></td>
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<tr>
<td>CANSSI Collaborative Research Team Projects</td>
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<td><strong>Statistical Inference for Complex Surveys</strong></td>
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<td><strong>with Missing Observations</strong></td>
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<td><img src="image1" alt="Puzzle Image" /></td>
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