

## Philippe Desjardins-Proulx

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CONTACT	Graduate (Ph.D.) student Department of Biology, Université du Québec à Montréal Quebec Center for Biodiversity Science, McGill University, Canada. <i>Phone:</i> +1-418-732-9877 <i>E-mail:</i> philippe.d.proulx@gmail.com <i>WWW:</i> <a href="http://phdp.github.com/">http://phdp.github.com/</a> <i>GitHub:</i> <a href="https://github.com/PhDP">https://github.com/PhDP</a>
CITIZENSHIP	Canada.
LANGUAGES	French & English. Basic knowledge of Japanese.
RESEARCH INTERESTS	<b>Machine Learning (Artificial Neural Networks, Probabilistic Graphical Models); Evolutionary Genomics; Molecular Ecology;</b> Biodiversity; Theoretical Population Genetics; Theoretical Ecosystem Ecology; Artificial Intelligence Algorithms.
OTHER INTERESTS	<b>Effective Technical Writing in English;</b> Web Programming; Scientific Computing; Artificial Intelligence in Board Games and for Medical Diagnosis; Computational Finance.
MAJOR AWARDS	<b>From:</b> Natural Sciences and Engineering Research Council of Canada • <b>Award:</b> Alexander Graham Bell Graduate Scholarship, 09/2012–08/2015 • <b>Value:</b> 105 000\$ (equivalent to 105 000 USD or 8 150 000 JPY, 2012 est.)
EDUCATION	<b>Department of Biology, Université du Québec à Montréal, Montréal, Canada.</b>  Ph.D., September 2012 – August 2015 [ <i>expected</i> ] <ul style="list-style-type: none"><li>• Thesis Proposal: <i>Artificial Intelligence and the Puzzle of Genomic Diversity</i></li><li>• Adviser: Dr. Dominique Gravel</li><li>• Area of Study: Artificial Intelligence (machine learning: neural networks, probabilistic graphical models), evolutionary genomics, molecular ecology.</li></ul> <b>College of Engineering, University of Illinois at Chicago, Chicago, USA.</b>  Graduate Certificate in Bioinformatics, 2012, <ul style="list-style-type: none"><li>• Area of Study: Machine learning (Artificial Intelligence) and biostatistics.</li></ul> <b>Université du Québec, Québec, Canada.</b>  B.S., 2009, <ul style="list-style-type: none"><li>• Major in Biology,</li><li>• Minor in Mathematics &amp; Computer Science.</li></ul>
REFEREED JOURNAL PUBLICATIONS	[1] <b>P Desjardins-Proulx</b> , EP White, JJ Adamson, K Ram, T Poisot, and D Gravel. Developing a preprint culture in biology. <i>Submitted to PLOS Biology (in review)</i>  [2] R Vergilino, TA Elliott, <b>P Desjardins-Proulx</b> , TJ Crease and F Dufresne. Evolution of a transposon in <i>Daphnia</i> hybrid genomes. <i>Accepted in Mobile DNA</i>

	<p>[3] D Ai, <b>P Desjardins-Proulx</b>, C Chu, and G Wang. The influence of immigration and dispersal limitation on the repeatability of niche and neutral communities. <i>PLOS ONE</i> 7(9): e46164, 2012. DOI: 10.1371/journal.pone.0046164</p> <p>[4] <b>P Desjardins-Proulx</b> and D Gravel. A complex speciation-richness relationship in a simple neutral model. <i>Ecology and Evolution</i> 2(8): 1781–1790, 2012. DOI: 10.1002/ece3.292</p> <p>[5] <b>P Desjardins-Proulx</b> and D Gravel. How likely is speciation in neutral ecology? <i>The American Naturalist</i> 179(1):137-144, 2012. DOI: 10.1086/663196</p>
OTHER CONTRIBUTIONS	<p>[6] <b>P Desjardins-Proulx</b>. The case for arXiv and a broader conception of peer-reviews. Invited blog, International Network of Next-Generation Ecologists, 2012. <a href="http://www.innge.net/?q=node/330">http://www.innge.net/?q=node/330</a>.</p> <p>[7] <b>P Desjardins-Proulx</b>. A foot in the neutral trap. Invited comment for <i>Trends in Ecology &amp; Evolution</i>, 2012.</p> <p>[8] <b>P Desjardins-Proulx</b>. L’origine de la Biodiversité. Le Mouton Noir, Mai-Juin. Cahier Spécial sur la Biodiversité p.2, 2010. <i>Selected and republished by Gaia-Pressé, a group sponsored by the Université Laval</i>.</p>
TEACHING EXPERIENCE	<p><b>Université du Québec, Québec, Canada.</b></p> <ul style="list-style-type: none"> <li>• 2012. CUDA training (intensive one-day course).</li> <li>• 2012. Scientific computing with C (grad. students/post-docs).</li> <li>• 2011. Scientific computing with C (grad. students/post-docs).</li> </ul>
REFeree SERVICE	<p><i>Journal of Theoretical Biology, Theoretical Ecology, Acta Biotheoretica, Journal of Plant Ecology.</i></p>
COMPUTER SKILLS	<ul style="list-style-type: none"> <li>• <b>Programming languages:</b> <ul style="list-style-type: none"> <li>– <b>Advanced:</b> C++11, C.</li> <li>– <b>Intermediate:</b> JavaScript, Haskell, Java, Go, Python, MatLab.</li> <li>– <b>Basic:</b> Ruby, R.</li> </ul> </li> <li>• <b>Tools &amp; Frameworks</b> <ul style="list-style-type: none"> <li>– <b>Operating systems:</b> Linux (Debian, Ubuntu).</li> <li>– <b>Revision control:</b> git, mercurial.</li> <li>– <b>Compilers:</b> gcc, clang, intel, ghc.</li> <li>– <b>Database:</b> MongoDB.</li> <li>– <b>Web:</b> Node.js (Express).</li> </ul> </li> <li>• <b>Web sites:</b> <ul style="list-style-type: none"> <li>– Personal page: <a href="http://phdp.github.com">http://phdp.github.com</a>.</li> <li>– TEE’s website: <a href="http://chaire-eec.uqar.ca">http://chaire-eec.uqar.ca</a>.</li> </ul> </li> </ul>
PROFESSIONAL MEMBERSHIPS	<ul style="list-style-type: none"> <li>• Society for the Study of Evolution 2008–...</li> <li>• International Society for Computational Biology 2010–...</li> <li>• Institute of Electrical and Electronics Engineers 2012–...</li> </ul>
GRADUATE COURSES	<ul style="list-style-type: none"> <li>• 2012. Datamining (machine learning) [A (4.0/4.0), 4 credits] <b>UIC</b></li> <li>• 2011. Biostatistics [A (4.0/4.0), 4 credits] <b>UIC</b></li> <li>• 2010. Intro. to bioinformatics [A (4.0/4.0), 4 credits] <b>UIC</b></li> </ul>

- 2010. Reading course on Ancestral Recombination Graphs [A, 3 credits]      UQAR

## REFEREES

### Dr. Dominique Gravel

- Professor (Université du Québec à Rimouski)
- Canada Research Chair.
- e-mail: [dominique-gravel@uqar.qc.ca](mailto:dominique-gravel@uqar.qc.ca)
- phone: 1.418.723.1986 #1752

★ *I worked as a research professional in Dr. Gravel's lab from September 2009 to August 2012, we also collaborated on many scientific projects.*

### Dr. James Rosindell

- Post-doctoral researcher, Imperial College London, UK.
- e-mail: [j.rosindell@imperial.ac.uk](mailto:j.rosindell@imperial.ac.uk)
- phone: +44 (0)2075 942263

★ *I have collaborated with Dr. Rosindell on several occasions.*