
CURRENT POSITION	Ph.D. candidate, Quebec Center for Biodiversity Science, McGill University, Canada., Université du Québec à Montréal, Canada.
CONTACT	<i>email:</i> philippe.d.proulx@gmail.com <i>email (alt.):</i> phdp@outlook.com <i>phone:</i> +1-418-732-9877 <i>skype:</i> philippe.desjardins-proulx <i>www:</i> http://phdp.github.io/ <i>github:</i> https://github.com/phdp/ <i>twitter:</i> phqpqc
CITIZENSHIP	Canada
LANGUAGES	FRENCH: Native language ENGLISH: Full professional proficiency JAPANESE: Elementary proficiency
EXPERTISE	<ul style="list-style-type: none">• Artificial Intelligence / Machine Learning: My thesis focuses on the problem of transfer learning, which could be described as the capacity to automatically transfer knowledge between a source (the knowledge we want to transfer) and a target (the model we want to build). I'm also very interested in autonomous (reinforcement learning) agents.• Scientific computing: Almost all my undergraduate projects were done on scientific computing applied to biology and I worked four years (2009-2012) as a research professional, focusing on C/C++/CUDA simulations on the Canada Research Chair on Terrestrial Ecosystems' scientific cluster.• Ecology: I have contributed to theoretical evolutionary ecology (speciation, community ecology) and worked with several biological data-sets.
EDUCATION	Department of Biology, Université du Québec à Montréal, Montréal, Canada. Ph.D., September 2012 – August 2015 [expected] <ul style="list-style-type: none">• Thesis Proposal: <i>Transfer learning using semantic networks, with applications to biology</i>• Adviser: Dr. Dominique Gravel• Co-adviser: Dr. Timothée Poisot• Area of Study: Artificial Intelligence; Machine learning; Natural Language Processing; Biology.• Comprehensive exam: Maximum Entropy in Ecology & Evolution.• Courses: Advanced Distributed Computing (A13). College of Engineering, University of Illinois at Chicago, Chicago, USA. Graduate Certificate in Bioinformatics, 2012, <ul style="list-style-type: none">• Area of Study: Data Mining & biostatistics. Université du Québec, Québec, Canada. B.S., 2009, <ul style="list-style-type: none">• Major in Biology,• Minor in Mathematics & Computer Science.

AWARDS	<p>Alexander Graham Bell Graduate Scholarship (2012)</p> <ul style="list-style-type: none"> • From: Natural Sciences and Engineering Research Council of Canada • Description: Most competitive Canadian scholarship in science. • Value: 105 000\$ (equivalent to 105 000 USD or 8 150 000 JPY, 2012 est.) <p>Windows Azure Research Award (2013)</p> <ul style="list-style-type: none"> • From: Microsoft Research • Description: The first group of 32 awards given by Microsoft. Gives a generous access to Microsoft Azure for research purpose. • Proposal: <i>Growing Intelligence with Cloud Markov Logic.</i> • Value: >40 000 USD.
REFEREED JOURNAL PUBLICATIONS	<p>[1] P Desjardins-Proulx. Global Transfer Learning between Arbitrary Sources using Semantic Networks. <i>In prep.</i></p> <p>[2] P Desjardins-Proulx, EP White, JJ Adamson, K Ram, T Poisot, and D Gravel. The case for open preprints in biology. <i>PLoS Biology</i> 11(5): e1001563</p> <p>[3] R Vergilino, TA Elliott, P Desjardins-Proulx, TJ Crease and F Dufresne. Evolution of a transposon in <i>Daphnia</i> hybrid genomes. <i>Mobile DNA</i> 4-7, 2013. DOI: 10.1186/1759-8753-4-7</p> <p>[4] D Ai, P Desjardins-Proulx, 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>[5] P Desjardins-Proulx 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>[6] P Desjardins-Proulx 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>[7] P Desjardins-Proulx. The case for arXiv and a broader conception of peer-reviews. Invited blog, International Network of Next-Generation Ecologists, 2012. http://www.innge.net/?q=node/330.</p> <p>[8] P Desjardins-Proulx, JL Rosindell, T Poisot, and D Gravel. A simple model to study phylogeographies and speciation patterns in space, 2012. arXiv: 1203.1790.</p> <p>[9] P Desjardins-Proulx. A foot in the neutral trap. Invited comment for <i>Trends in Ecology & Evolution</i>, 2012.</p> <p>[10] P Desjardins-Proulx. L'origine de la Biodiversité. Le Mouton Noir, Mai-Juin. Cahier Spécial sur la Biodiversité p.2, 2010. <i>Selected and republished by Gaia-Presse, a group sponsored by the Université Laval.</i></p>
JOB EXPERIENCES	<p>Research Professional, Canada Research Chair on Terrestrial Ecosystem</p> <ul style="list-style-type: none"> • From 2009 to 2012. • Supervisor: Dr. Dominique Gravel

- **Responsibilities:** Programming high-performance simulations in C, C++, and CUDA on a distributed cluster; Design of ecological models to understand biodiversity; Teaching scientific computing to graduate students (C, C++, Python, UNIX tools).

TEACHING
EXPERIENCES

Université du Québec, Québec, Canada.

- 2013. I organized a series of meetings on information theory and inference.
- 2012. CUDA training (intensive one-day course).
- 2012. Scientific computing with C and C++ (grad. students/post-docs).
- 2011. Scientific computing with C and C++ (grad. students/post-docs).

REFeree
SERVICE

Physica A: Statistical Mechanics and its Applications; Journal of Theoretical Biology; Theoretical Ecology; Acta Biotheoretica; Molecular Ecology Ressources; The American Naturalist; Journal of Plant Ecology.

PROFESSIONAL
MEMBERSHIPS

- Institute of Electrical and Electronics Engineers 2012–...
- Quebec Center for Biodiversity Science 2012–...

PROGRAMMING
SKILLS

I have some experience with many programming languages, libraries, frameworks. I only list here my current working tools:

- **Languages:** Clojure, C++, C, Haskell, F#, JavaScript (Node.js).
- **Databases:** MongoDB, Cassandra, PostgreSQL.
- **Operating Systems:** Linux (mostly Debian/Ubuntu-based).
- **Writing:** \LaTeX 2 ϵ .

GRADUATE
COURSES

- 2013. Advanced Distributed Computing [3 credits] Athabasca
- 2012. Datamining (machine learning) [4 credits] UIC
- 2011. Biostatistics [4 credits] UIC
- 2010. Intro. to bioinformatics [4 credits] UIC
- 2010. Reading course on Ancestral Recombination Graphs [3 credits] UQAR

ONLINE
COURSES

- 2014. Technology Entrepreneurship NovoEd/Stanford

REFEREES

On request.