Philippe Desjardins-Proulx

February 18, 2013

Current Position

Ph.D. candidate,
Department of biology, Université du Québec à Montréal, Canada,
Quebec Center for Biodiversity Science, McGill University, Canada.

Contact

email: philippe.d.proulx@gmail.com
email (alt.): p.desjardinsproulx@ymail.com
phone: +1-418-732-9877
www: http://phdp.github.com/
github: https://github.com/phdp/
bitbucket: https://bitbucket.org/phdp/

Citizenship

Canada

Languages

English: Fluent (*writing & speaking*)
French: Fluent (*writing & speaking*)
Japanese: Limited working proficiency (*writing only*)

Professional Interests

Artificial Intelligence; Machine Learning (artificial neural networks, probabilistic graphical models); Statistics/Inference; Evolutionary Genomics; Molecular Ecology. Effective Technical Writing in English

Major Awards

From: Natural Sciences and Engineering Research Council of Canada

- **Award:** Alexander Graham Bell Graduate Scholarship, 09/2012–08/2015
- **Value:** 105 000$ (equivalent to 105 000 USD or 8 150 000 JPY, 2012 est.)

Education

Department of Biology, Université du Québec à Montréal, Montréal, Canada.

Ph.D., September 2012 –

- Thesis Proposal: *Machine Learning and the Puzzle of Genomic Diversity*
- Adviser: Dr. Dominique Gravel
- Area of Study: Machine learning, probabilistic graphical models, molecular ecology/evolution.

College of Engineering, University of Illinois at Chicago, Chicago, USA.

Graduate Certificate in Bioinformatics, 2012,

- Area of Study: Machine learning and biostatistics.

Université du Québec, Québec, Canada.

B.S., 2009,

- Major in Biology,
- Minor in Mathematics & Computer Science.

Refereed Journal Publications

[1] **P Desjardins-Proulx**, EP White, JJ Adamson, K Ram, T Poisot, and D Gravel. Developing a preprint culture in biology. *Submitted to PLOS Biology (in review)*

[2] R Vergilino, TA Elliott, **P Desjardins-Proulx**, TJ Crease and F Dufresne. Evolution of a transposon in *Daphnia* hybrid genomes. *Mobile DNA* 4-7, 2013. DOI: 10.1186/1759-8753-4-7

[3] 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. *PLOS ONE* 7(9): e46164, 2012.
DOI: 10.1371/journal.pone.0046164

[4] **P Desjardins-Proulx** and D Gravel. A complex speciation-richness relationship in a simple neutral model. *Ecology and Evolution* 2(8): 1781–1790, 2012.
DOI: 10.1002/ece3.292

[5] **P Desjardins-Proulx** and D Gravel. How likely is speciation in neutral ecology? *The American Naturalist* 179(1):137-144, 2012.
DOI: 10.1086/663196

Other Contributions

[6] **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.

[7] **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.

[8] **P Desjardins-Proulx**. A foot in the neutral trap.
Invited comment for *Trends in Ecology & Evolution*, 2012.

[9] **P Desjardins-Proulx**. L'origine de la Biodiversité. Le Mouton Noir, Mai-Juin. Cahier Spécial sur la Biodiversité p.2, 2010. *Selected and republished by Gaia-Presse, a group sponsored by the Université Laval.*

Teaching Experience

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 (grad. students/post-docs).
- 2011. Scientific computing with C (grad. students/post-docs).

Referee Service

Journal of Theoretical Biology, Theoretical Ecology, Acta Biotheoretica, Journal of Plant Ecology.

Computer Skills

- **Programming languages:**
  - **Advanced:** C++11, C.
  - **Intermediate:** JavaScript, Java, Ruby, Go, Python, MatLab.
  - **Basic:** Haskell, R.
- **Tools & Frameworks**
  - **Operating systems:** Linux (Debian, Ubuntu, Arch).
  - **Revision control:** git, mercurial.
  - **Compilers:** clang, gcc, intel, ghc.
  - **Database:** MongoDB, MySQL.
  - **Web:** Node.js (Express), basic php/css3/html5.
- **Web sites:**
  - Personal page: http://phdp.github.com.
  - TEE's website: http://chaire-eec.uqar.ca.

Professional Memberships

- Society for the Study of Evolution 2008–...
- International Society for Computational Biology 2010–...

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

Graduate Courses

- 2012. Datamining (machine learning) [A (4.0/4.0), 4 credits] UIC
- 2011. Biostatistics [A (4.0/4.0), 4 credits] UIC
- 2010. Intro. to bioinformatics [A (4.0/4.0), 4 credits] UIC
- 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
- phone: 1.418.723.1986 #1752

⋆ *I worked as a research profesionnal 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
- phone: +44 (0)2075 942263

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