EDWARD LAURENCE

Member of Dynamica Research Group, Université Laval

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📶 www.edwardlaurence.me

EDUCATION

2016 - [2019] **Ph.D. in Physics,** Université Laval
Resilience of neural networks
Supervisors: Pr Louis J. Dubé, and Pr Patrick Desrosiers

2014 - 2016 **M.Sc. in Physics**, Université Laval
Supervisors: Pr Louis J. Dubé, Pr Patrick Desrosiers, and Pr Daniel Côté

2011 - 2014 **B.Sc. in Physics**, Université Laval

TECHNOLOGY SKILLS

Programming
Swift, C/C++, Python, R, Javascript, Objective-C, Ruby, GNU/Linux, LaTeX, SASS

Frameworks
D3js , Node.js, CocoaPods, Alamofire, SwiftyJSON, FacebookPop, FBSDLoginKit, CodeData, GoogleMaps, Bootstrap, Django, I18n, and many scientific librairies (PyTorch, Numpy, Matplotlib, Scipy, …)

Developing tools & Cloud services
Github, Xcode, Sublime Text, Openshift, iTunes Connect, Heroku, Amazon AWS, Chrome Store, Inkscape, Sketch, Zeplin

WORK EXPERIENCE

2017 **Self-employed | Analysis**
Analysis and visualization of the collaborations Sentinel North, Université Laval

2014 - 2017 **Teaching assistant, Université Laval**
Correction & Answering questions
Non-linear dynamics, chaos and complexity
Numerical physics
Statistical physics

PROFILE

Passionate about **data analysis**, including **deep learning**, **data visualization**, and **iOS development**. Enthusiast about **open software** projects. Would like to have an impact in my **community**.

ENTREPRENEURSHIP

Cofounder of Serum
Web plugin to detect fake news.
Developed in 48 hours.
Bayesian inference of fake news.
Available on Chrome store.
www.factserum.co
2017

VOLUNTEERING AND INVOLVEMENT

Violinist in palliative care
Hôpital Saint François d'Assise
2015 - 2016

Garmin Watch Face
More than 5000 downloads

Tutor in science
Cégep Garneau
2009 - 2014

LANGUAGES

French   >   Native
English   >   Advanced
Spanish   >   Basic

AWARDS

2017 - [2019] **Graduate research award**
Fond de recherche Nature et technologies (FRQNT)
20 000$/year

2017 **Sentinel North fellowship**
Sentinel North, Université Laval
18 000$/year

2017 **Byron-T. Darling scholarship**
Département de physique, de génie physique et d'optique, Université Laval
5 000$

2015 - 2016 **Graduate research award**
Fond de recherche Nature et technologies (FRQNT)
15 000$

2012 **Undergraduate research award**
Natural Sciences and Engineering Research Council of Canada (NSERC)
4 500$

SELECTED SCIENTIFIC CONTRIBUTIONS

Papers or preprints

2018 Exact analytical solution of irreversible binary dynamics on networks
E. Laurence, J.-G. Young, S. Melnik, and L. J. Dubé
Phys. Rev. E, **97**, 032302

2018 Network archaeology: phase transition in the recoverability of network history
J.-G. Young, L. Hébert-Dufresne, **E. Laurence**, C. Murphy, G. St-Onge, and P. Desrosiers
arXiv: 1803.09191

Selected presentations
The speaker is in bold

2017 12th International School and Conference on Network Science, Indianapolis (USA)
Functional resilience in dynamical complex networks with adaptive connectivity
E. Laurence, P. Desrosiers, N. Doyon, and L. J. Dubé

Persistent activity of neural dynamics on hierarchical networks
E. Laurence, P. Desrosiers, and L. J. Dubé

2014 Complex networks are an emerging property of hierarchical preferential attachment (poster)
L. Hébert-Dufresne, E. Laurence, A. Allard, and J.-G. Young
9th International School and Conference on Network Science, Berkeley (USA)
Outstanding Poster Award