EDWARD LAURENCE

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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
Complex networks and connectomics: from hierarchy to functions
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

Selected frameworks
NodeJS, CocoaPods, Alamofire, SwiftyJSON, FacebookPop, FBSDLoginKit, CodeData, GoogleMaps, Bootstrap, Django, I18n, D3js

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

WORK EXPERIENCE

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

2013 **Undergraduate research assistant**
Dynamica research group, Université Laval
under the supervision of Pr. Louis J. Dubé

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

Cofounder of Wasper
iOS applications for delivery.
Available on TestFlight.
www.wasper.co
2015 -

Cofounder of Stepic
iOS application
Geolocation of photos.
Available on TestFlight.
2014 - 2015

VOLUNTEERING AND INVOLVEMENT

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

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 - [2019] **Sentinel North fellowship**
Sentinel North, Université Laval

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

2015 **Business ideas contest** (for Wasper)
Entreprenariat ULaval
100$

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

2011 **Franco-Rasseti scholarship**
Département de physique, de génie optique et d'optique, Université Laval
1 000$

Recognition

2014 **Outstanding Poster Award**
9th International School and Conference on Network Science, Berkeley

2012 **Best oral in geophysics**
Canadian Undergraduate Physics Conference, Vancouver

2010 - 2014 **Participation to Quebec's semi-final**
Le Championnat International des Jeux Mathématiques et Logiques

SCIENTIFIC CONTRIBUTIONS

Papers in refereed journals

2015 Complex networks as an emerging property of hierarchical preferential attachment
L. Hébert-Dufresne, **E. Laurence**, A. Allard, J.-G. Young, and L. J. Dubé
Phys. Rev. E., **92** 062809

2014 Relationship between surface temperature and extreme rainfalls: a multi-timescale and event-based analysis
G. Panthou, A. Mailhot, **E. Laurence**, and G. Talbot, J.
Hydrometeor., **15**, 2014, DOI: 10.1175/JHM-D-14-0020.1

Preprint

2017 Susceptible-infected-susceptible dynamics on the rewired configuration model
G. St-Onge, J.-G. Young, **E. Laurence**, C. Murphy, and L. J. Dubé
arXiv, 1701.01740

2016 Finite size analysis of the detectability limit of the stochastic block model
J.-G Young, P. Desrosiers, L. Hébert-Dufresne, **E. Laurence**, and L. J. Dubé
arXiv, 1701.00062

Selected conferences

The speaker noted 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

2016 11th International School and Conference on Network Science, Seoul (Korea)
Ensemble symmetries and the detectability limit of finite size stochastic block models
J.-G. Young, L. Hébert-Dufresne, E. Laurence, P. Desrosiers, and L. J. Dubé

Time-dependent Spatial Growth of Complex Networks
C. Murphy, E. Laurence, G. St-Onge, J.-G. Young, and L. J. Dubé

2015 Exact analytical solution of binary dynamics on networks
E. Laurence, J.-G. Young, S. Melnik, and L. J. Dubé
10th International School and Conference on Network Science, Saragosse (Spain)