EDWARD LAURENCE

Updated March 16, 2017

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EDUCATION

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

2014 - 2016 **M.Sc. in Physics**, Université Laval
Complex networks and connectomics: from hierarchy to functions
Supervisors: Pr Louis J. Dubé, Patrick Desrosiers Ph.D, and Pr Daniel Côté

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

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

2012 **Undergraduate research assistant**
Institut National de la Recherche Scientifique
under the supervision of Pr. Alain Mailhot

ENTREPRENEURSHIP

2017 - **Founder of Sérum**
Programmation of a web plugin to detect fake news. Organization of an hackathon.
www.factserum.co

2015 - **Founder of Wasper**
Programmation of iOS mobile applications for iPhone and iPad. Start-up development.
www.wasper.co

VOLUNTEERING AND INVOLVEMENT

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

Tutor in science
Cégep Garneau
2009 - 2014

Chief editor
Student yearbook (100 pages)
2014

Director of physics student newspapers
2013 - 2014

Volunteer
Promotional activities of Université Laval
2009 - 2015

COMPETENCES

Languages

French	>	Native
English	>	Advanced
Spanish	>	Basic

Informatics
C/C++, Python, Matlab/GNU Octave, GNU/Linux, R, LaTeX, Swift, Objective-C, HTML/CSS, Django, MySQL, Ruby, Javascript, I18n

AWARDS

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

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 presentations

The speaker noted in bold

 : Talk  : Poster

(2017) Persistent activity of neural dynamics on hierarchical networks

E. Laurence, P. Desrosiers, and L. J. Dubé
12th International School and Conference on Network Science, Indianapolis (USA)

2016 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
11th International School and Conference on Network Science, Seoul (Korea)

2016 Time-dependent Spatial Growth of Complex Networks

C. Murphy, E. Laurence, G. St-Onge, J.-G. Young, and L. J. Dubé
11th International School and Conference on Network Science, Seoul (Korea)

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)

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

2014 Relationship between surface temperature and extreme rainfalls: a multi-timescale and event-based analysis
A. Maillot, and E. Laurence
2013 Joint Scientific Congress of the CMOS, CGU and CWRA, Saskatoon (SK)

2013 A hierarchical approach for complex networks
E. Laurence
Canadian Undergraduate Physics Conference, Hamilton (ON)

2013 Étude des relations entre les précipitations extrêmes et la température
E. Laurence, and A. Mailhot
Colloque la recherche hydrologique au Québec, Québec (QC)

2012 Relationship between surface temperature and extreme rainfalls: a multi-timescale and event-based analysis
E. Laurence, and A. Mailhot
Canadian Undergraduate Physics Conference, Vancouver (CB)