

Leon Chlon

CONTACT INFORMATION	Department of Brain and Cognitive Sciences Massachusetts Institute of Technology 43 Vassar St, Cambridge, MA 02139	lchlon@mit.edu leonchlon.strikingly.com
RESEARCH INTERESTS	I develop flexible probabilistic machine learning frameworks for dynamical systems modeling and causal inference. I am particularly interested in non-convex optimization strategies for stochastic gradient descent, Bayesian non-parametric approaches such as Hierarchical Dirichlet Process Hidden Markov Models, and Recurrent Neural Networks.	
CURRENT POSITION	Research Fellow Harvard Medical School & MIT (Joint Appointment) <i>Neurostatistics, Bayesian Inference & Machine Learning</i> <ul style="list-style-type: none">• Mentor: Professor Emery N. Brown	January 2018 -
ACADEMIC BACKGROUND	PhD, University of Cambridge <i>Statistics and Computational Biology</i> <ul style="list-style-type: none">• Supervisor: Dr. Florian Markowetz• Thesis: <i>Machine Learning Methods for Cancer Immunology.</i> MPhil, University of Cambridge <i>Theoretical Physics</i> <ul style="list-style-type: none">• Supervisors: Dr. Neil Greenham & Dr. Henning Sirringhaus• Thesis: <i>A Computational Model for Specialised Spinodal Decomposition and Charge Dynamics within Bulk Heterojunction Third Phase Systems.</i> BSc, University of Warwick <i>Mathematics and Physics</i> <ul style="list-style-type: none">• First Class Honours, Highest Ranking Honours Physics Thesis.• Thesis: <i>A Predictive Model for Impedance Spectroscopy.</i>	October 2014 - September 2017 October 2013 - September 2014 October 2010 - July 2013
INDUSTRY EXPERIENCE	Data Science Intern, Sunofia Advisors <ul style="list-style-type: none">• Worked on stock price component modeling for the statistical arbitrage desk.	Summer 2012
AWARDS	<ul style="list-style-type: none">• Cambridge University Technology and Enterprise Club £1,000 Winner 2016• Cambridge University Technology and Enterprise Club £1,000 Winner 2016• Churchill College Next Generation Leader Fellowship (£20,000) 2015• Cambridge University GLS Best First Year PhD Poster 2015• CRUK - Engineering & Physical Sciences Research Council Studentship 2014	
REFEREED PUBLICATIONS	<ul style="list-style-type: none">[1] S Sivakumar*, I Santiago*, L Chlon* and F Markowetz Master Regulators of Oncogenic KRAS Response in Pancreatic Cancer: An Integrative Network Biology Analysis. <i>PLoS Medicine</i> 14 (1), e1002223[2] HR Ali, L Chlon, PDP Pharoah, F Markowetz and C Caldas. Patterns of immune infiltration in breast cancer and their clinical implications: a gene-expression-based retrospective study. <i>PLoS medicine</i> 13 (12), e1002194.	

PRE-PRINTS

- [1] L Chlon*, A Song*, S Subramanian, H Soulat, J Tauber, D Ba and M Prerau. Multitaper Spectral Estimation HDP-HMMs for EEG Sleep Inference. *arXiv preprint arXiv:1805.07300* in submission for NIPS 2018.
- [2] L Chlon*, A Godicelj* and F Markowetz. Causal Modeling Dissects Tumour -Microenvironment Interactions In Breast Cancer. *bioRxiv*, 144832.

* - Equal Contribution

TEACHING

- **Co-Lecturer** - Massachusetts Institute of Technology 2018
Course: 9.272J/HST.576J Topics in Neural Signal Processing
- **Teaching Fellow** - Harvard University 2018
Course: ENG-SCI 201 Decision Theory
- **Intern Supervisor** - Cambridge University 2016
Department: Cancer Research UK, Cambridge Institute

SELECTED TALKS

- Massachusetts Institute of Technology Cambridge, USA, 2018
Title: Recurrent Neural Networks for EEG Data
- American University of Beirut Beirut, Lebanon, 2017
Title: Analyzing Next Generation Sequencing Data using R
- University of Cambridge Cambridge, UK, 2017
Title: Causal Inference for Cancer Immunogenetics

TECHNICAL SKILLS & LANGUAGES

- Matlab, R, Python (Keras/Tensowflow, Theano, SKLearn), C, C++, SQL.
- Arabic, English.

REVIEWING SERVICES & MISC

- Nature Communications, PloS Computational Biology and Genome Biology. (2014 - 2017)
- A Level and GSCE Tutor - Mathematics and Physics (2015)

REFERENCES

All references and referee contact details are available on request.