Jonathan H. Huggins

CONTACT INFORMATION	MIT, Building 46-4066 77 Massachusetts Avenue Cambridge, MA 02139 USA	*E-mail:* jhuggins@mit.edu *WWW:* jhhuggins.org

RESEARCH
INTERESTS

Bayesian nonparametric inference, probabilistic programming, unsupervised and online learning, learning theory.

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA USA
   Ph.D. Student, Computer Science, September 2012
   - Advisors: Cynthia Rudin and Joshua B. Tenenbaum

Columbia University, Columbia College, New York, NY USA
   B.A., Mathematics, May 2012 (GPA: 4.04)
   - Research Advisors: Liam Paninski and Frank D. Wood
   - Selected coursework: Machine Learning, Computational Learning Theory, Probability Theory, Real Analysis, Graph Theory

HONORS AND
AWARDS

Columbia University: graduated Phi Beta Kappa (2011) and Summa Cum Laude (2012)

ACADEMIC
EXPERIENCE

Massachusetts Institute of Technology, Cambridge, MA USA

Graduate Student   **September 2012 - present**

Columbia University, Columbia College, New York, NY USA

Teaching Assistant   **June 2011 - May 2012**
Duties have included office hours and grading of homework for introductory statistics and data structures courses.

PUBLICATIONS

5. Pakman, A.*, Huggins, J. H.* & Paninski, L. (2012). Fast penalized state-space methods for inferring dendritic synaptic connectivity. Accepted, *Journal of Computational Neuroscience.* (*contributed equally)

4. Pnevmatikakis E., Rahnama Rad, K., Huggins, J. H. & Paninski, L. (2012). Fast low-SNR Kalman filtering and forward-backward smoothing via a low-rank perturbative approach. Accepted, *Journal of Computational and Graphical Statistics.*

3. Huggins, J. H. & Paninski, L. (2012). Optimal experimental design for sampling voltage on dendritic trees in the low-SNR regime. *Journal of Computational Neuroscience 32(2), 347-66.* [pdf]

2. Vilain, M., Huggins, J. H. & Wellner. B. (2009). Sources of performance in CRF transfer training: a business name-tagging case study. Recent Advances in Natural Language Processing 2009. [pdf]

1. Vilain, M., Huggins, J. H. & Wellner. B. (2009). A simple feature-copying approach to long-distance dependencies. Proc. of the 13th Conference on Computational Natural Language Learning 2009. [pdf]

PAPERS UNDER
REVIEW

Huggins, J. H. & Wood, F. Infinite structured hidden Markov models.

PROFESSIONAL
SERVICE

Conference Reviewer:
- Advances in Neural Information Processing Systems, 2011

PROFESSIONAL
EXPERIENCE

Google, Inc, New York, NY USA

Summer Engineering Intern   **May, 2012 - August, 2012**

Developed, created and deployed a language-model based "gibberish detector" for identifying short text sequences as nonsensical.

MITRE Corp., Bedford, MA USA

Technical Co-op   **May 2007 - August 2009**

Worked with multiple teams on natural language processing problems such as co-reference finding, action recognition in free text, and named entity recognition. Projects were implemented in OCaml, Python, and Perl and used techniques such as integer linear programming and conditional random fields.

COMPUTER SKILLS
- Languages: C++, Java, Python, Perl, Matlab, and OCaml
- Algorithms: Markov chain Monte Carlo techniques for Bayesian posterior inference