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Narges Sharif-Razavian

Research Interests

- Probabilistic Graphical Models: Regularized Parameter Estimation and Inference.
- Time Varying Network Models: Protein Function Models, Gene Regulatory Network Analysis, Social Network Analysis.
- Structural Biology: Protein/Protein Interaction, Drug Design, Protein Structure Prediction, Computational Biology.

Education

Aug2009-present:

PhD, *Language Technologies Institute*, School of Computer Science, Carnegie Mellon University, Pittsburgh, PA, USA.

Aug2007-Aug2009:

Master of Science, *Language Technologies Institute*, School of Computer Science, Carnegie Mellon University, Pittsburgh, PA, USA.

Sep2005-Aug2007:

Master of Science, *Information Technology*, ECE Department, University of Tehran, Tehran, Iran.

Sep2001-Sep2005:

Bachelor of Science, *Software Engineering*, Computer Engineering Department, Sharif University of Technology, Tehran, Iran.

Publications

Narges Razavian, Hetu Kamisetty, Christopher Langmead, “*Expectation Propagation for von-Mises Graphical Models*”, Under preparation for ICML2011.

Narges Razavian, Hetu Kamisetty, Christopher Langmead, “*The von Mises Graphical Model: Structure Learning*”, Submitted to AISTATS 2011.

Narges Razavian, Hetu Kamisetty, Arvind Ramanathan, Subhdeep Moitra, Christopher Langmead, “*DyNA: Dynamic Network Analysis for Molecular Dynamics Data*”, Under preparation for Journal of Nucleic Acid Research. (Extended version of Manuscript: [link](#))

Narges Razavian, Subhdeep Moitra, Hetu Kamisetty, Arvind Ramanathan, Christopher J. Langmead, “*Time-Varying Gaussian Graphical Models of Molecular Dynamics Data*” Proceedings of 3DSIG 2010 Structural Bioinformatics and Computational Biophysics, Boston, MA. July 9-10, 2010. ([link](#))

Narges Razavian, Selen Uguroglu, Andreas Zollmann. “*Species Selection for Phylogeny-Based Motif Detection*”, Computational Genomics Technical Report, June 2009. ([link](#))

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Narges Razavian, Andreas Zollmann. “*An Overview of Nonparametric Bayesian Models and Applications to Natural Language Processing*”, Languages and Statistics II project report, January 2009.([link](#))

Narges Razavian, Stephan Vogel, “*Fixed Length Word Suffix as New Factors in Factored Statistical Machine Translation*”, Language Technologies Institute, Student Research Symposium, September 2010.([link](#))

Narges Razavian, Stephan Vogel, “*The Web as a Platform to Build Machine Translation Resources*”, International Workshop on Intercultural Collaboration(IWIC2008), Stanford, USA February 2009.([link](#))

Narges Sharif-razavian, Fattaneh Taghiyareh, “*Embedding Corporate Blogging System in CRM Solutions*” *Information Technology: New Generations (ITNG)*, Las Vegas, USA, April 2008.([link](#))

Mostafa Keikha, Narges Razavian, Farhad Oroumchian, Hassan Seyedrazi, “*Document Representation and Quality of Text: An Analysis*”, *Survey of Text Mining: Clustering, Classification, and Retrieval, Second Edition*, Chapter 12, pp219-232, Springer London, ISBN 978-1-84800-046-9, July 2007.([link](#))

Research Experience

Aug2009-present: *Estimation and Inference on Time Varying Regularized Graphical Models, applied to Protein Torsion Angles*, advised by Christopher Langmead (cjl@cs.cmu.edu)

Sep2009-Jan2009: *None Parametric Bayesian Model for Chinese Word Segmentation*, advised by Noah. A. Smith (nasmith@cs.cmu.edu)

Aug2007-Aug2009: *Statistical Machine Translation*, advised by Stephan Vogel

Jan 2009-Aug2009: *Social Network Features to Boost User Participation*, advised by Robert Kraut(robert.kraut@cmu.edu) and Stephan Vogel(Stephan.vogel@cs.cmu.edu).

Relevant Courses

10-725 Optimization
10-708 Graphical Models
15-879 Algorithms for Computational Structural Biology
10-810 Computational Genomics
11-762 Languages and Statistics II

Tools and Languages

Matlab, Pymol, Java, Perl, C++, Python, English, Farsi