

Saeed Amizadeh

CONTACT INFORMATION	Intelligent Systems Program University of Pittsburgh 210 S. Bouquet St. Room: 5406 Sennott Sq. Pittsburgh, PA 15260 United States	<i>Mobile:</i> +1-412-951-4808 <i>Landline:</i> +1-412-624-9182 <i>E-mail:</i> saeed@cs.pitt.edu <i>WWW:</i> people.cs.pitt.edu/~saeed
RESEARCH INTERESTS	Large-Scale Data Analysis, Spectral Graph-based Methods, Dimensionality Reduction, Kernel Methods, Probabilistic Graphical Models, Sparsity, Semi-supervised Learning, Clustering	
EDUCATION	University of Pittsburgh , Pittsburgh, PA USA Ph.D. Candidate, Intelligent Systems Program, (Will be graduated by August 2013) <ul style="list-style-type: none">• Thesis Title: <i>Non-Parametric Graph-based Methods for Large-Scale Problems</i>• Comprehensive Exam Topics: <i>Machine Learning, Dimensionality Reduction, Decision Making under Uncertainty</i>• Adviser: Dr. Milos Hauskrecht• Area of Study: Artificial Intelligence - Machine Learning M.S., Intelligent Systems Program, June 2010 <ul style="list-style-type: none">• Thesis Title: <i>Latent Variable Model for Learning in Pairwise Markov Networks</i>• Adviser: Dr. Marek Druzdzal• Area of Study: Artificial Intelligence - Machine Learning University of Tehran , Tehran, Iran M.S., School of Electrical and Computer Engineering, August 2007 <ul style="list-style-type: none">• Thesis Title: <i>A Bayesian Approach to Hierarchical Concept Learning</i>• Adviser: Dr. Majid Nili Ahmadabadi• Area of Study: Artificial Intelligence and Robotics B.S., School of Electrical and Computer Engineering, June 2004 <ul style="list-style-type: none">• <i>Summa cum laude</i> graduate• Area of Study: Computer Science - Software Engineering	
PROFESSIONAL EXPERIENCE	Technicolor Lab. , Palo Alto, CA USA <i>Research Intern in Technicolor Palo Alto Lab.</i> June 2012 to July 2012 <ul style="list-style-type: none">• Developed and implemented a multi-armed bandit framework for graphs to be used for recommender systems Microsoft Research , Redmond, WA USA <i>Research Intern in Machine Learning and Applied Statistics (MLAS)</i> June 2011 to September 2011 <ul style="list-style-type: none">• Developed and implemented a fast mode-seeking clustering framework for non-Euclidean spaces	

Intel Labs Pittsburgh, Pittsburgh, PA USA

Summer Research Fellow

June 2010 to September 2010

- Designed a mathematical framework for analyzing Human Brain Connectome datasets

Summer Research Fellow

June 2009 to September 2009

- Designed a human-like online Causal Discovery model

BLU Lab, University of Pittsburgh, Pittsburgh, PA USA

Research Assistant

June 2008 to May 2009

- Developed structure discovery methods dealing with temporality in medical texts.

Decision Systems Lab, University of Pittsburgh, Pittsburgh, PA USA

Research Collaborator

February 2008 to May 2008

- Designed and developed the Bayesian network structure learning module for GENe & SMILE project

iVisioTech Co., Tehran, Iran

R&D team member, System Designer

September 2006 to July 2007

- Developed background modeling, tracking and occlusion detection methods for a real-time visual surveillance system.

Robotics and AI Lab, University of Tehran, Tehran, Iran

Research Assistant

September 2004 to August 2006

- Developed mobile robot vision and navigation methods.

JOURNAL
PUBLICATION

H. Firouzi, M. Nili Ahmadabadi, B. N. Araabi, **S. Amizadeh**, M. S. Mirian, Interactive Learning in Continuous Multimodal Space: A Bayesian Approach to Soft Partitioning and Learning, in *IEEE Transactions on Autonomous Mental Development*, Vol. 4, No. 2, pp: 124-138, 2012.

S. Amizadeh, F. Rastegar and C. Lucas, Incorporating Heuristics in Evolutionary Optimization, in *International Journal of Information Technology and Intelligent Computing*, Vol. 1, No. 2, pp: 259-270, 2006.

CONFERENCE
PUBLICATIONS

S. Amizadeh, B. Thiesson and M. Hauskrecht, The Bregman Variational Dual-Tree Framework, to appear in *the 29th Conference on Uncertainty in Artificial Intelligence (UAI-13)*, pp:22-31, Bellevue, WA, USA, July 2013.

S. Amizadeh, B. Thiesson and M. Hauskrecht, Variational Dual-Tree Framework for Large-Scale Transition Matrix Approximation, in *the 28th Conference on Uncertainty in Artificial Intelligence (UAI-12)*, pp:64-73, Catalina Island, USA, August 2012.

S. Amizadeh, H. Valizadegan and M. Hauskrecht, Factorized Diffusion Map Approximation, in *JMLR W&CP 22: the 15th International Conference on Artificial Intelligence and Statistics (AISTATS-12)*, pp:37-46, La Palma, Canary Islands, April 2012.

H. Valizadegan, **S. Amizadeh**, M. Hauskrecht, Sampling Strategies to Evaluate the Performance of Unknown Predictors, in *2012 SIAM International Conference on Data Mining (SDM-12)*, pp:494-505, Anaheim, California, April 2012.

- S. Amizadeh**, S. Wang, and M. Hauskrecht, An Efficient Framework for Constructing Generalized Locally-Induced Text Metrics, in *the 22nd International Joint Conference on Artificial Intelligence (IJCAI-11)*, pp:1159-1164, Barcelona, Spain 2011.
- S. Amizadeh** and M. Hauskrecht, Latent Variable Model for Learning in Pairwise Markov Networks, in *AAAI-10: the 24th Conference on Artificial Intelligence*, pp: 382-387, Atlanta, U.S. 2010.
- S. Amizadeh**, M. Nili Ahmadabadi, B. N. Araabi and R. Siegwart, A Bayesian Approach to Conceptualization Using Reinforcement Learning, in *IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, Switzerland, Sep. 2007.
- S. Amizadeh**, M. Nili Ahmadabadi, C. Lucas, Bayesian Continuous-State Reinforcement Learning, in *Proc. of International Computer Society of Iran Computer Conference (CSICC07)*, pp: 1515-1521, Tehran, Iran, Feb. 2007.

WORKSHOPS

- S. Amizadeh**, M. Chen, D. Dash, M. Hauskrecht, W. Schneider, Low-dimensional Embedding of Large-scale Infinite-dimensional Function Spaces with Application to Human Brain Connectome. *NIPS workshop on Low-rank Methods for Large Scale Machine Learning*, in conjunction with the 24th annual conference on Neural Information Processing Systems (NIPS), 2010.
- S. Amizadeh** and D. Dash, Efficient Causal Discovery and Abstraction in Perception Streams. *NIPS workshop on Bounded-rational analyses of human cognition: Bayesian models, approximate inference, and the brain*, in conjunction with the 23rd annual conference on Neural Information Processing Systems (NIPS), 2009.
- H. Harkema, H. Piwovar, **S. Amizadeh**, J. Dowling, J. Ferraro, P. Haug, W. Chapman, A Baseline System for i2b2 Obesity Challenge, in *The 2nd i2b2 Workshop on Challenges in Natural Language Processing for Clinical Data*, Nov. 2008.

AWARDS AND HONORS

University of Pittsburgh

- 2011 Andrew Mellon Predoctoral Fellowship awarded by the Dietrich School of Arts and Sciences, 2011

Microsoft Research Redmond

- 2011 Microsoft Research Internship, Summer 2011

Carnegie Mellon University, Intel Labs Pittsburgh

- 2010 CMU/Intel Summer Research Fellowship, Summer 2010
- 2009 CMU/Intel Summer Research Fellowship, Summer 2009

University of Pittsburgh

- Arts and Sciences (A&S) Fellowship, School of Arts and Sciences, 2009
- Arts and Sciences (A&S) Fellowship, School of Arts and Sciences, 2007

University of Tehran

- Ranked 32nd among 15,000 participants in the Iranian National Entrance Exam for M.S. in Computer Engineering, 2004
- Graduated summa cum laude: ranked 3rd among graduates of Computer Engineering at the University of Tehran, 2004

International Robocup Competitions

- 3rd place in American Open Robocup Competitions: The Coach Simulation League, the Thunder Team, Carnegie Mellon University, USA, 2003

- 5th place in International Robocup Competitions: The Coach Simulation League, the Thunder Team, Padova University, Italy, 2003

MAJOR PROJECTS

- A highly efficient C++ library for constructing and working with large-scale data graphs based on the Variational Dual-tree Framework **2012**
- A Java/SQL library to compute APACHEIII mortality score for large-scale patient/clinical data; currently used by a research team at University of Pittsburgh Medical Center (UPMC) **2011**
- A C#/Sho.NET framework for Variational Mode-Seeking Clustering (developed during internship at Microsoft Research) **2011**
- An R library for Spectral Diffusion Analysis on data graphs **2011**
- An R framework for efficient learning of undirected Gaussian Graphical Models **2010**
- The C++ Structure Learning module for the Bayesian Network software GeNIe & SMILE **2008**
- The Tracking and Background Modeling modules for a Visual Tracking/Video Processing system in C++/OpenCV **2007**
- A Java/Matlab framework for Bayesian Concept Learning **2006**
- A Visual C# Windows application for analysis and visualization of RoboCup games' log files **2003**

TEACHING ASSISTANTSHIP

ECE Department, University of Tehran, Tehran, Iran

<i>Artificial Intelligence</i>	Spring 2006 and Spring 2003
<i>Operating Systems</i>	Spring 2003
<i>Advanced Programming</i>	Spring 2003
<i>Computer Fundamentals</i>	Fall 2003
<i>Compiler Design</i>	Spring 2002

MAJOR GRADUATE COURSES

Carnegie Mellon University

- Optimization, Fall 2012 (Audit)
- Unsupervised Learning, Fall 2009 (Grade: A)
- Statistical Machine Learning, Spring 2009 (Audit)
- Probabilistic Graphical Models, Fall 2008 (Grade: A-)

University of Pittsburgh

- Advanced Machine Learning, Fall 2011
- Machine Learning, Spring 2008 (Grade: A)
- Decision Analysis and Decision Support Systems, Spring 2008 (Grade: A+)
- Theory of Learning Algorithms, Fall 2007 (Grade: A)
- Natural Language Processing, Fall 2007 (Grade: A)

University of Tehran

- Stochastic Systems Control, Fall 2005 (Grade: 20/20)
- Distributed Artificial Intelligence, Spring 2005 (Grade: 19.5/20)
- Machine Vision, Spring 2005 (Grade: 19.5/20)
- Pattern Recognition, Fall 2004 (Grade: 14.5/20)
- Fuzzy Logic, Fall 2004 (Grade: 16.5/20)
- Robotics, Fall 2004 (Grade: 16/20)

MATHEMATICAL EXPERTISE Advanced Probability and Statistics, Linear Algebra, Optimization, Spectral Graph Theory, Functional Analysis, Operator Theory, Game Theory, Algorithms and Complexity, Combinatorics, Graph Theory

TECHNICAL EXPERTISE Programming: C, C++ (also familiar with C++11), Java, C#, SQL, Python, Prolog
Mathematics and Statistics: MATLAB, R, Sho.NET
Platforms: Java2EE, .NET
Libraries: OpenCV, OpenGL, MapReduce, Boost, Weka
General Applications: T_EX (L^AT_EX, B_IB_TE_X), Eclipse, Microsoft Office
Source Control: Subversion, CVS
Operating Systems: Microsoft Windows family, Mac OS X, Linux
Languages: Farsi (Native), English (Fluent), Arabic (Elementary)

INTERESTS **Panther Tango Club**, University of Pittsburgh

Club President and Instructor

September 2010 to Present

- Teaching Argentine tango and organizing tango events