

Bahram Behzadian

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Research Interests

Reinforcement learning, machine learning, robotics.

Education

UNIVERSITY OF NEW HAMPSHIRE
Advisor: *Marek Petrik*

Ph.D. candidate in Computer Science, 2019-Present

UNIVERSITY OF NEW HAMPSHIRE

MSc. in Computer Science, 2015-2019

Master's thesis: *Feature Selection by Singular Value Decomposition for Reinforcement Learning*

Thesis advisor: *Marek Petrik*

TAMPERE UNIVERSITY OF TECHNOLOGY, FINLAND

MSc. in Machine Automation, 2010-2013

Master's thesis: *Robot Localization with Weak Maps*

Thesis advisor: *Wolfram Burgard*

AZAD UNIVERSITY OF MASHHAD, IRAN

BSc. in Mechanical Engineering, 2002-2007

Final project: *HVAC design for 16,000 sq. ft cold storage warehouse*

Research Experience

REINFORCEMENT LEARNING AND ROBUSTNESS LAB

Research Assistant

2015–Present

University of New Hampshire, Durham, NH, USA

Projects: Optimizing the ambiguity sets for robust Markov decision processes, efficient algorithms for S-rectangular robust MDPs, and feature construction from high-dimensional raw-input observation for linear value function approximation for reinforcement learning.

AUTONOMOUS INTELLIGENT SYSTEMS LAB

Research Assistant

2012–2014

University of Freiburg, Freiburg, Germany

Project: Mobile robot localization and navigation on hand-drawn maps.

Refereed Conference Publications

B. Behzadian, M. Petrik, C. P. Ho. “Fast Algorithms for L_∞ constrained S-rectangular Robust MDPs” To appear at *Neural Information Processing Systems (NeurIPS)*, 2021.

B. Behzadian, R. H. Russel, M. Petrik, C. P. Ho. “Optimizing Percentile Criterion using Robust MDPs” In *The International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2021.

B. Behzadian, S. Gharatappeh, M. Petrik. “Fast Feature Selection for Linear Value Function Approximation” In *International Conference on Automated Planning and Scheduling, (ICAPS)*, 2019.

B. Behzadian, P. Agarwal, W. Burgard, and G. D. Tipaldi. “Monte Carlo localization in hand-drawn maps” In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2015.

F. Boniardi, B. Behzadian, W. Burgard, and G. D. Tipaldi. “Robot navigation in hand-drawn sketched maps.” In *Proc. of the IEEE European Conference on Mobile Robotics (ECMR)*, 2015.

Symposiums & Workshops	R. H. Russel, B. Behzadian, M. Petrik. “Optimizing Norm-bounded Weighted Ambiguity Sets for Robust MDPs” In <i>33rd Conference on Neural Information Processing Systems (NeurIPS) Safety and Robustness in Decision-making Workshop</i> , 2019.		
	B. Behzadian, M. Petrik. “Feature Selection by Singular Value Decomposition for Reinforcement Learning” In <i>International Conference on Machine Learning (ICML) Prediction and Generative Modeling Workshop</i> , 2018.		
	B. Behzadian, M. Petrik. “Low-rank Feature Selection for Reinforcement Learning” In <i>International Symposium on Artificial Intelligence and Mathematics, (ISAIM)</i> , 2018.		
Additional Employment	ENVIO, INC. <i>AI Engineer Intern</i> Dover, NH, USA Worked on solving a vehicle routing problem designed for intermodal trucking		Summer 2018
	PERGAS POLYMER CO. <i>PLC Programmer / Automation Engineer</i> Tehran, Iran Provided technical support in the troubleshooting of electrical and PLC control systems and machinery		2008–2009
	TADBIR SANAT CONSULTING ENGINEERS <i>HVAC System Designer</i> Tehran, Iran Performed calculations in mechanical systems design, selection, sizing of equipment, and interconnected HVAC, hydronic, steam, and plumbing systems		2007–2008
Teaching Experience	UNIVERSITY OF NEW HAMPSHIRE <i>Teaching Assistant</i>		
	Intro to Computer Science I		Fall 2016, Spring 2018
	Intro to Computer Science II		Spring 2018
	From Problems to Algorithms to Programs		Fall 2017
	From Programs to Computer Science		Spring and Fall 2017
Scholarships /Awards			
	CEPS Graduate Fellowship College of Engineering and Physical Sciences, University of New Hampshire A prestigious award that is based on the strength of academic record and the potential for success in graduate school.		2015
	Thesis and Dissertation Fellowship Office of International Affairs, Tampere University of Technology		2012
Technical Skills			
	Programming Languages: Python; C/C++; R; Matlab. Tools: Git; L ^A T _E X; Linux; TLA+ .		