

Sam Safavi

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EDUCATION

- Ph.D., Electrical Engineering**, GPA: 3.97 December 2017
Department Electrical & Computer Engineering, Tufts University, Medford, USA
Thesis title: “Distributed Dynamic Fusion: Theory and Applications”, Advisor: Prof. Usman A. Khan
- Master of Science in Automated Systems and Control**, awarded with Distinction May 2011
University of Sheffield, Sheffield, United Kingdom
Thesis title: “Artificial Immune Systems for Multi-Objective Optimization”, Advisor: Prof. M. Mahfouf
- Bachelor of Science in Electrical Engineering** May 2007
University of Tehran, Tehran, Iran
Thesis title: “Preprocessing and Classification Methods for Brain-Computer Interfaces”, Advisor: Prof. S. K. Setarehdan

RESEARCH INTERESTS

Machine-learning
Distributed Algorithms
Networked Estimation and Control
Multi-agent Networks
Robotics

HONORS AND AWARDS

Best Student Paper Finalist award, 48th IEEE Asilomar Conference on Signals, Systems and Computers, 2014.
Best Student Paper in the Network track and **Third-place Prize for Best Student Paper**, 50th IEEE Asilomar Conference on Signals, Systems, and Computer, 2016.

RESEARCH EXPERIENCE

Post-Doctoral Fellow, Boston College Jan 2018-Present
Computer Science Department

Graduate Research Assistant, Tufts University Jan 2013-Dec 2017
Signal Processing and Robotic Networks (SPARTN) Lab

Research Intern, Boston College June 2017-Aug 2017
Computer Science Department, Advisor: Prof. José Bento

TEACHING EXPERIENCE

Teaching Assistant, Tufts University
Introduction to Computing in Engineering Spring 2017
Networked Control and Estimation Spring 2016
Feedback Control Systems Fall 2015, 2016, 2017

PENDING PATENT

Mobile Network Localization, U.S. Serial Number: 62/417,751 Filed 11/4/2016

INDUSRTY EXPERIENCE

- GSM Radio optimization Engineer**, Parmand Telecom. Co., Tehran, Iran
TCI Khouzestan 100 Road Sites Development and Optimization Project 2010
- RF Drive test, Optimization & Analysis
 - Maintaining Handover & other parameters to meet KPI's
 - Neighbor Analysis and Planning & Frequency re-planning for problematic areas
- Telecommunication Engineer**
TCI Khouzestan 100 Road Sites Development and Optimization Project 2009
TCI Tehran Suburb BTS Development Project 2008
- Commissioning and Integration of base stations
 - Radio programming and alignments

PROFESSIONAL SERVICE

Reviewer for:

IEEE Transactions on Automatic Control
IEEE Transactions on Control of Network System
IEEE Transactions on Signal and Information Processing over Networks
IEEE Journal of Selected Topics in Signal Processing
IEEE Signal Processing Letters
IEEE Access
IEEE Digital Signal Processing Conference
American Control Conference
IEEE Conference on Control Technology and Applications (CCTA 2017)

CERTIFICATES

- Data Analysis, Exploratory Data Visualization, Data Cleaning (Dataquest.io) 2017
Python Programming (Dataquest.io) 2017
Machine Learning (Stanford University through Coursera) 2017
Robotics: Aerial Robotics (University of Pennsylvania through Coursera) 2016
Introduction to Computer Science and Programming Using Python (MIT through edX) 2016

SKILLS

Programming languages: MATLAB, Python

Languages: Farsi (native), English (full professional proficiency)

PUBLICATIONS

Journals

- S. Safavi and U. A. Khan, "Revisiting finite-time distributed algorithms via successive nulling of eigenvalues," *IEEE Signal Processing Letters*, vol. 22, no. 1, pp. 54-57, Jan. 2015.
- S. Safavi and U. A. Khan, "Leader-follower consensus in mobile sensor networks," *IEEE Signal Processing Letters*, vol. 22, no. 12, pp. 2249-2253, Dec. 2015.
- S. Safavi and U. A. Khan, "Asymptotic stability of stochastic LTV systems with applications to distributed dynamic fusion", in *IEEE Transactions on Automatic Control*, vol. 62, no. 11, pp. 5888-5893, Nov. 2017.
- S. Safavi and U. A. Khan, "Localization in mobile networks via virtual convex hulls", in *IEEE Transactions on Signal and Information Processing over Networks*, 2017.
- S. Safavi and U. A. Khan, "An opportunistic linear-convex algorithm for localization in mobile robot networks", in *IEEE Transactions on Robotics*, vol. 33, no. 4, pp. 875-888, Aug. 2017.
- [Under review] S. Safavi, U. A. Khan, S. Kar, and J. M. F. Moura, "Distributed Localization in: A linear theory," submitted to *Proceedings of the IEEE*, Dec. 2017.

Conferences

S. Safavi and U. A. Khan, "On the convergence rate of swap-collide algorithm for simple task assignment," *2014 48th IEEE Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, CA, 2014, pp. 1507-1510.

S. Safavi and U. A. Khan, "Dynamic leader-follower algorithms in mobile multi-agent networks", *IEEE Digital Signal Processing Conference*, Singapore, Jul. 2015.

S. Safavi and U. A. Khan, "Unbounded connectivity: Asymptotic stability criteria for stochastic LTV systems," *2016 American Control Conference (ACC)*, Boston, MA, 2016, pp. 7019-7024.

S. Safavi and U. A. Khan, "A distributed range-based algorithm for localization in mobile networks", *2016 50th IEEE Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, 2016, pp. 1380-1384.

S. Safavi and U. A. Khan, "On the convergence of time-varying fusion algorithms: Application to localization in dynamic networks," *2016 IEEE 55th Conference on Decision and Control (CDC)*, Las Vegas, NV, USA, 2016, pp. 4907-4912.