# Curriculum Vitae/Resume Zahra Zahedi

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#### Summary

A second-year PhD student in Computer Science, motivated and solution-oriented with a variety of professional and research experience.

#### Education

## Arizona State University, Tempe, AZ.

• PhD student in Computer Engineering. (GPA: 4/4)

2018-present

o Supervisor: Dr. Subbarao Kambhampati

### Shiraz University, Shiraz, Iran.

- Master student in Electrical Engineering, Control. (GPA: 3.79/4) 2015-2017
  - o Thesis Title: Nash equilibrium seeking without steady-state oscillation
  - o Supervisors: Dr. Alireza Khayatian, Dr. Mohammad Mehdi Arefi
- B.Sc., Electrical Engineering, Control.(GPA: 3.73/4)

2011-2015

## Current Research Projects

## $\bullet \ Model \ of \ trust \ in \ monitoring \ a \ robot$

- In this work, we have investigated a human robot interaction scenario when a human supervisor has zero trust on a robot worker by modeling their interaction as Bayesian game. We introduce a notion of trust boundary that optimizes the supervisor's monitoring cost while ensuring that the robot workers stick to the safe plans.
- Explaining AI-Moderated Task-Allocation Outcomes using Negotiation Trees
  - We considered a task-allocation problem where an AI Task Allocator (AITA) comes up with a fair allocation for a group of humans. And the AITA is able to provide explanation in the form of negotiation tree to convince humans who thinks a counterfactual allocation is more fair.

## Skills

- Programming Language: Python, MATLAB, Clojure, C/C++.
- Editors: LATEX, Microsoft Office.
- Operating Systems: Microsoft Windows, Linux.
- Research and Planning: Problem identification, Information gathering, Investigating different methods, Development, Evaluations, Analyzing and contributing results.
- Interpersonal skills: Communications, Teamwork, Confidence, Self management, Flexibility, Problem solving, creative and innovative to develop new solution.

#### Honors

• Fulton Fellowship Award 2019-2020

• Grad Fellowship Award Fall 2019 and Spring 2020

• 2nd rank among the Control students in Shiraz University 2016-2017

• Granted merit-based admission to M.Sc. in Shiraz University 2015

• Honored as Active Student, Shiraz University 2015

• Honored as **Exceptional Talent**, Shiraz University 2015

• Ranked within top 10% among more than 120 undergraduate students in Electrical and Computer Engineering Department, Shiraz University.

• Ranked Top 0.7% among near 300,000 participants in the National University Entrance Exam (Konkoor) in Math & Physics 2011.

#### **Publications**

- 1. Z. Zahedi\*, S. Sengupta\*, S. Kambhampati, "'Why not give this work to them?' Explaining AI-Moderated Task-Allocation Outcomes using Negotiation Trees,"
- 2. Z. Zahedi\*, S. Sengupta\*, S. Kambhampati, "To Monitor or Not: Observing Robot's Behavior based on a Game-Theoretic Model of Trust," 21st International Workshop on Trust in Agent Societies (co-located with AAMAS), 2019.
- 3. Z. Zahedi\*, A. Olmo\*, T. Chakraborti, S. Sreedharan, S. Kambhampati, "Towards Understanding User Preferences for Explanation Types in Model Reconciliation," HRI Late Breaking Report, 2019.
- 4. Z. Zahedi, M. M. Arefi, A. Khayatian, "Seeking Nash equilibrium in non-cooperative differential games," submitted.
- 5. Z. Zahedi, M. M. Arefi, A. Khayatian, "Fast convergence to Nash equilibria without steady-State oscillation," Systems and Control Letters, 2019.
- 6. Z. Zahedi, M. M. Arefi, A. Khayatian, and H. Modares, "Fast seeking of Nash equilibria without steady-state oscillation in games with non-quadratic payoffs," in proc. 2018 American Control Conference.
- 7. Z. Zahedi, M. M. Arefi, and A. Khayatian, "Convergence without oscillation to Nash equilibria in non-Cooperative games with quadratic payoffs," 25th Iranian Conference on Electrical Engineering (ICEE), published in IEEE Xplorer, May 2017.
- 8. F. Zahedi, Z. Zahedi, "Real-time, Simultaneous Multi-Channel Data Acquisition Systems with no time skews between input channels," International Journal of Signal Processing Systems (IJSPS), vol. 4, no. 1, pp. 17-21, 2016.
- F. Zahedi, Z. Zahedi, "A review of Neuro-fuzzy Systems based on Intelligent Control," Journal of Electrical and Electronic Engineering, vol. 3, no. 2-1, pp. 58-61, 2015.
- 10. F. Zahedi, Z. Zahedi, "Real-time, Simultaneous Multi-Channel Data Acquisition Systems with no time skews between input channels," 6th International Conference on Signal Processing Systems (ICSPS), 2014.
- 11. F. Zahedi, Z. Zahedi, "Review of Neuro-fuzzy based on Intelligent Control," 8th Symposium on Advances in Science & Technology," 2014 (Persian).

# Membership & Experience

 $\bullet \ \ Student \ member \ of \ IEEE$ 

Dec 2016- 2018

• Student member of Control System Society (CSS)

Dec 2016- 2018

• Member of the central council in Sheykh-E-Bahaei engineering interdisciplinary association, Shiraz University May 2013 - 2016

• Member of IEEE Iran Section, Shiraz branch association Nov 2012 - Sep 2013

• Member of Premier Idea Support Center, Shiraz University 
Jul 2012 - 2016

• Member of Amateur Radio Labratory, Shiraz University Mar 2011 - 2017

• Working in Amateur Radio Labratory, Shiraz University Nov 2011 - 2016

## Research Interests

- Human Aware AI
- Human AI collaboration
- Automated Planning
- Game Theory