

Curriculum Vitae/Resume

Zahra Zahedi

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Summary

A Third-year PhD student in Computer Science, motivated and solution-oriented with a variety of professional and research experience. I'm working on trust, interpretability and fairness in Human-AI interaction such that they have a more effective cooperation.

Education

Arizona State University, Tempe, AZ.

- **PhD** student in Computer Engineering. (GPA: 4/4) 2018-present
 - **Supervisor:** Dr. Subbarao Kambhampati

Shiraz University, Shiraz, Iran.

- **Master** student in Electrical Engineering, Control. (GPA: 3.79/4) 2015-2017
 - **Thesis Title:** Nash equilibrium seeking without steady-state oscillation
 - **Supervisors:** Dr. Alireza Khayatian, Dr. Mohammad Mehdi Arefi
 - **B.Sc.**, Electrical Engineering, Control. (GPA: 3.73/4) 2011-2015
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Current Research Projects

- **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.
 - **Negotiation-Aware Task Allocation**
 - 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.
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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
 - *Hassan Mahdi Award, Shiraz University* 2018
 - *Honored as **Outstanding student**, Shiraz University* 2017
 - ***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.
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Publications

1. Z. Zahedi*, S. Sengupta*, S. Kambhampati, "‘Why not give this work to them?’ Explaining AI-Moderated Task-Allocation Outcomes using Negotiation Trees," Cooperative AI Workshop, NeurIPS2020.
2. S. Sengupta*, Z. Zahedi*, 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.
9. 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 (ICSPPS)*, 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

- *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 Laboratory, Shiraz University* *Mar 2011 - 2017*
 - *Working in Amateur Radio Laboratory, Shiraz University* *Nov 2011 - 2016*
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Research Interests

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