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*

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.*
- ***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*
- *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.*

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.*
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 (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

- *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*
