

# MohammadAmin Fazli

## PERSONAL INFORMATION

Intelligent Social & Economical Systems  
Department of Computer Engineering  
Sharif University of Technology  
Tehran, Iran

E-mail: fazli@sharif.edu  
Web: <http://sharif.edu/~fazli>  
Tel: +98 (21) 66166691

## RESEARCH INTERESTS

- Complex Systems
- Data Analysis
- Software Engineering
- Computational Business & Economics
- Game Theory
- Optimization
- Dynamical Systems

## EDUCATION

**Ph.D in Computer Engineering** Department of Computer Engineering, Sharif University of Technology, Tehran, Iran (September 2011-2015)

- **GPA: 19.52/20**, 5 courses
- **Thesis Title:** “Optimizing the Behavior of Best Response Dynamics over Social Networks”, under the supervision of prof. Habibi

**MSc in Computer Engineering** Department of Computer Engineering, Sharif University of Technology, Tehran, Iran (September 2009-2011)

- **GPA: 19.68/20**, 32/32 units (ranked 1st among all computer engineering students, including AI, Hardware, Algorithm and Computation, Software, Network and IT)
- **Thesis Title:** “Bounded budget network creation games”, under the supervision of prof. Safari.

**BSc in Hardware Engineering** Department of Computer Engineering, Sharif University of Technology (September 2005-June 2009)

- **GPA: 18.55/20**, 157/140 units (ranked 2nd among all computer engineering students, including Hardware, Software and IT).
- **Thesis Title:** “Approximation Algorithms for Minimizing Movement Problems” under the supervision of prof. Ghodsi.

## PROFESSIONAL EXPERIENCES:

- ◇ **Technical Consultant & R&D Supervisor** Motamed Melal Sharif (MyMotamed) Company, 2021-now
- ◇ **Member of Board of Directors & R&D Supervisor** Danesh Afzar Naroon Sharif (Danesh Solutions) Company
- ◇ **Assistant Professor**, Department of Computer Engineering, Sharif University of Technology, 2017-now.
- ◇ **Co-Founder & Technical Lead**, Tradebin WealthTech group, 2019-now.
- ◇ **Member of Board of Directors & R&D Supervisor**, Intelligent Informations Solutions Center, Sharif University of Technology, 2019-now.
- ◇ **Member of Executive Committee**, The Computer Society of Iran, 2018-now.
- ◇ **Post Doctoral Position**, Sharif University of Technology, 2015-2016.
- ◇ **Senior Consultant**, Danesh Afzar Naroon Sharif (Danesh Solutions) Company, 2013-2021.
- ◇ **Technical Project Lead** in various large software projects, Intelligent Informations Solutions Center, Sharif University of Technology, 2014-now.
- ◇ **Software Architect** in various large software projects, Intelligent Informations Solutions Center, 2011-now.

- ◇ **Co-Founder & Membership in the Board of Directors**, Danesh School, 2008-2019.
- ◇ **Software Developer, Designer& Analyst** in various large projects, Intelligent Informations Solutions Center, Sharif University of Technology, 2007-2014.

## ACHIEVEMENTS

- ◇ Recognized as an exceptional talented MSc Student and been granted for Ph.D of computer engineering, 2011.
- ◇ Selected as the best MSc student of the computer engineer department, Sharif university of technology, 2011.
- ◇ Selected as the third-best MSc student of the university, Sharif university of technology, 2011.
- ◇ Recipient of the grant of the 11th Max Planck Advanced Course on the Foundations of Computer Science (ADFOCS), 2010.
- ◇ Ranked **1st** in cumulative GPA among more than 80 MSc students of the department, 2009 beginners, Sharif university of technology, 2009.
- ◇ Ranked **2nd** in cumulative GPA among more than 150 BSc students of the department, 2005 beginners, Sharif university of technology, 2009
- ◇ Recognized as an exceptional talented BSc student and been granted for MSc of computer engineering, 2008

## PUBLICATIONS **Journal Papers:**

1. "A Comprehensive Survey of Convolutions in Deep Learning: Applications, Challenges, and Future Trends" in IEEE Access Joint work with Abolfazl Younesi, Mohsen Ansari, Alireza Ejlali, Mohammad Shafique and Jorg Henkel, 2024.
2. "Late Acceptance Hill Climbing based Algorithm for Unmanned Aerial Vehicles (UAV) Path Planning Problem" in Applied Soft Computing ( **ASOC** ) Joint work with Emad Deilam Salehi - 2024.
3. "A Novel Levy Walk-based Framework for Scheduling Power-intensive Mobile Edge Computing Tasks" in Grid Computing ( **GC** ) Joint work with Abolfazl Younesi and Alireza Ejlali - 2024.
4. "RPS: Portfolio Asset Selection using Graph based Representation Learning" in Intelligent Systems with Applications ( **ISWA** ) Joint work with Parsa Alian, Ali Owfi and Erfan Loghmani - 2023.
5. "FNR: a similarity and transformer-based approach to detect multi-modal fake news in social media", Social Network Analysis and Mining (**SNAM**), joint work with Faeze Ghorbanpour, Maryam Ramezani and Hamid Reza Rabiee, 2023.
6. "Governance of Social Welfare in Networked Markets", IEEE Transactions on Computational Social Systems (**TCSS**), joint work with A. Amaniamedani, 2022.
7. "Secure Cloud Storage with Anonymous Deduplication Using ID Based Key Management ", Supercomputing (**SUPE**), joint work with M. Gharib, 2022.
8. "Expert Detection In Question Answer Communities", International Journal of Web Research (**IJWR**), joint work with H. Salimian and J. Habibi, 2022.
9. "Multi-view Approach to Suggest Moderation Actions in Community Question Answering Sites ", Information Sciences (**INS**), joint work with I. Moradnejad and J. Habibi, 2022.
10. "Transparent Indirect Investment in Digital Era based on Blockchain Technology ", the CSI Journal on Computing Science and Information Technology (**CSIT**), joint work with M. Naghavi and F. Mardookh Roohani, 2021, in Persian.
11. "Hybrid-Learning Approach Toward Situation Recognition and Handling", the Computer Journal (**TCJ**), joint work with J. Habibi and H. Rajaby Faghihi, 2020.

12. "A Video Game Testing Method Utilizing Deep Learning", the CSI Journal on Computer Science and Engineering (**JCSE**), joint work with M. Habibi and M. R. Taesiri, 2020.
13. "Parasite cloud service providers: on-demand prices on top of spot prices", **Helion**, joint work with J. Habibi and H. Haghshenas, 2019.
14. "The Emotional Promulgation of Social Norms in Social Networks Based on Structural Properties", International Journal of Information and Communication Technology Research (**IJICTR**), joint work with J. Habibi and S. H. Sadjadi, 2019.
15. "Computing the Cultural Distance between Countries by Mining Twitter Data", IEEE Transactions on Computational Social Systems (**TCSS**), joint work with I. Annamoradnejad, J. Habibi and Sadjad Tavakoli, 2019.
16. "Future parameter prediction by scoring rules", CSI Journal on Computer Science and Engineering (**JCSE**), joint work with S. Hajizadeh and J. Habibi, 2019.
17. "Effective Distribution of Requests in Federated Cloud Computing Environments Utilizing Statistical Multiplexing", Future Generation of Computer Systems (**FGCS**), joint work with M. Habibi and A. Movaghar, 2018.
18. "The Affective Evolution of Social Norms in Social Networks", IEEE Transactions on Computational Social Systems (**TCSS**), joint work with J. Habibi and H. Sadjadi, 2018.
19. "On Dynamic Monopolies of Cubic Graphs", CSI Journal on Computer Science and Engineering (**JCSE**), 2018.
20. "Controlling Best Response Dynamics for Network Games", IEEE Transactions on Network Science and Engineering (**TNSE**), joint work with J. Habibi, A. Maazallahi and M. Habibi, 2018.
21. "Using Shortcut Edges to Maximize the Number of Triangles in Graphs", Operations Research Letters (**ORL**), joint work with J. Habibi, S. Dehghani and S. Yazdanbod, 2015.
22. "A Bounded Budget Network Creation Game", ACM Transactions on Algorithms (**TALG**), joint work with S. Ehsani, A. Mehrabian, S. Sadeghian, M. Safari, M. Saghafian and S. ShokatFadaee, 2015.
23. "Euclidean Movement Minimization", Journal of Combinatorial Optimization (**JOCO**), joint work with N. Anari, M. Ghodsi, M. Safari, 2015
24. "Optimal Space Coverage with White Convex Polygons", Journal of Combinatorial Optimization (**JOCO**), joint work with S. Ehsani, M. Ghodsi, M. Safari, 2014
25. "Team Selection for Prediction Tasks", Journal of Combinatorial Optimization (**JOCO**), joint work with J. Habibi, A. Ghazimatin and H. Haghshenas, 2014.
26. "On the Non-progressive Spread of Influence through Social Networks", Theoretical Computer Science (**TCS**), joint work with J. Habibi, M. Ghodsi, P. Jalaly, S. Sadeghian and V. Mirrokni, 2014.
27. "Maximizing Non-monotone Submodular Set Functions Subject to Different Constraints: Combined Algorithms", Journal of Operations Research Letters (**ORL**), joint work with S. Fadaei and M. Safari, 2011.

#### Conference Papers:

1. "Novel Distance-Learning Methods to Overcome Challenges Caused by Covid-19 in Undergraduate Programming Courses ", the 14th International Conference on Education and New Learning Technologies (**EDULEARN 2022**), joint work with SP. Neshaei , AM. Namjoo , P. Chavoshian , P. Saremi MT. Jahaninejad and A. Kousheshi.
2. "Expert Detection in Question Answer Communities ", The 8th International Conference on Web Research (**ICWR 2022**), joint work with I. Annamoradnejad and J. Habibi, in Persian.

3. "Predicting Usefulness of Code Review Comments Using Machine Learning Algorithms", the 26th National CSI Computer Conference (**CSI 2021**), joint work with A. Mohammadi, in Persian.
4. "Predicting Subjective Features from Questions on QA Websites using BERT", The 6th International Conference on Web Research (**ICWR 2020**), joint work with I. Annamoradnejad and J. Habibi.
5. "Influence Maximization in Independent Cascading Model under Heterogenous Cost Conditions ", The 24th National CSI Computer Conference (**CSI 2019**), joint work with I. Annamoradnejad and J. Habibi, in Persian.
6. "The Effort-based Evolution of Social Norms in Online Social Networks", The 23th National CSI Computer Conference (**CSI 2018**), joint work with H. Sadjadi and J. Habibi, in Persian.
7. "A semi-Automatic Method for Detecting Computer Games' Graphic problems Using Cloud Computing", The 22th National CSI Computer Conference (**CSI 2017**), joint work with J. Habibi and M.R. Taesiri, in Persian.
8. "Task Routing Problem in Social Networks", The 2013 National Conference on Social Networks (**CYBERCONF 2013**), joint work with R. Izadpanah and A. Moeini.
9. "Improving the Behavior of Game theoretic models over Social Networks", The 18th National CSI Computer Conference (**CSI 2013**), joint work with J. Habibi, A. Maazallahi, in Persian.
10. "Naturalness of Network Creation Games, Measurement and Analysis", The 2012 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (**ASONAM 2012**), joint work with J. Habibi, M. Safari, H. Beyhaghi, Z. Fahmi.
11. "On the Non-progressive Spread of Influence through Social Networks", The 10th Latin American Theoretical Informatics Symposium (**LATIN 2012**), joint work with J. Habibi, M. Ghodsi, P. Jalaly, S. Sadeghian and V. Mirrokni.
12. "Social Balance and Signed Network Formation Games", The fifth International Workshop on Social Network Mining and Analysis (**SNA-KDD 2011**), in conjunction with The 13th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD 2011**), joint work with M. Malekzadeh, P. Jalaly, M. Safari and H.R. Rabiee.
13. "Euclidean Movement Minimization", The 23rd Canadian Conference on Computational Geometry (**CCCG 2011**), joint work with N. Anari, M. Ghodsi, P. Jalaly and M. Safari.
14. "On a Bounded Budget Network Creation Game", 23rd ACM Symposium on Parallelism in Algorithms and Architectures (**SPAA 2011**), joint work with S. Ehsani, A. Mehrabian, S. Sadeghian, M. Safari, M. Saghaian and S. Shokat-Fadaee.
15. "Envy Free Chain Store Pricing", The 2011 CSI International Symposium on Computer Science and Software Engineering (**CSSE 2011**), joint work with N. Nikparto and M. Saghaian.
16. "White Space Regions", 37th International Conference on Current Trends in Theory and Practice of Computer Science (**SOFSEM 2011**), joint work with S. Ehsani, M. Ghodsi, M. Safari, M. Saghaian and M. Tavakoli.
17. "Centralized Spectrum Sensing Using New Algorithmic Techniques", The 2nd International ICST Workshop on Cognitive Radio Network (**CRNet 2010**), in conjunction with 5th International ICST Conference on Communications and Networking (**CHINACOM 2010**), joint work with T. Abachi, A. A. Hemmatyar and M. Izadi.
18. "The Inefficiency of Equilibria in a Network Creation Game with Packet Forwarding", 35th International Conference on Current Trends in Theory and Practice of Computer Science (**SOFSEM 2009**), joint work with K. Khodamoradi, M. Farajtabar, M. Ghazvininejad and M. Ghodsi.

## TEACHING EXPERIENCES

### Teaching:

- (Graduate) Data Science in Software Engineering (Sharif University of Technology): Fall 2024
- (Graduate) Data Mining (Sharif university of technology): Fall 2019, Fall 2020, Fall 2021
- (Graduate) Advance Software Engineering (Sharif university of technology): Fall 2018
- (Graduate) Social and Economic Networks (Sharif university of technology): Spring 2016, Spring 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2021
- (Graduate) Algorithmic Game Theory (Sharif university of technology): Fall 2016, Fall 2022, Fall 2023
- (Under Graduate) Fundamentals of Programming (C Programming Language): Fall 2024, Fall 2023, Fall 2022, Fall 2020
- (Under Graduate) Advanced (Object Oriented) Programming (Java Programming Language): Spring 2023, Spring 2022, Spring 2020
- (Under Graduate) Data Structures and Algorithms (Sharif university of technology): Spring 2013
- (Under Graduate) System Analysis and Design (Sharif university of technology): Spring 2012, Fall 2016, Fall 2017, Spring 2018, Fall 2018, Fall 2019
- (Under Graduate) Discrete Event Simulation Systems (Sharif university of technology): Fall 2011, Spring 2017
- (College) C++ and Fundamentals of Computer Programming (Danesh school): 2009-2010
- (College) Combinatorics and Fundamentals of Olympiad of Informatics (Shahid Soltani school): 2004-2007
- (College) C++ Programming Language (Shahid Soltani school): 2006-2007

### Teaching Assistant:

- (Graduate) Software Engineering II (Sharif university of technology): Spring 2013
- (Graduate) Decision Support Systems (Sharif university of technology): Fall 2012
- (Under Graduate) System Analysis and Design (Sharif university of technology): Fall 2012
- (Under Graduate) Advanced Programming (Sharif university of technology): Spring 2010
- (Graduate) Advanced Algorithms (Sharif university of technology): Fall 2009
- (Under Graduate) Operating Systems (Sharif university of technology): Spring 2008
- (Under Graduate) Signals and Systems (Sharif university of technology): Fall 2007
- (Under Graduate) Design and Analysis of Algorithms (Sharif university of technology): Fall 2006, Spring 2007, Fall 2007
- (Under Graduate) Data Structures (Sharif university of technology): Spring 2006
- (Under Graduate) Discrete Structure (Sharif university of technology): Spring 2006, Spring 2007

### Presentations:

- “Maximizing the Spread of Social Norms in Social Networks”, Winter Seminar Series, Sharif University of Technology, Winter 2017.
- Numerous lectures on “Knowledge Management Processes and Methodologies for Oil & Gas Sector’s R&D Initiatives”, National Iranian Oil Company, Fall 2015.
- “Analyzing Adoption of Collaboration Technologies in National Iranian Oil Company ERP Project”, The first PetoICT Conference, Winter 2014.

- “Spectrum Sensing by Computational Geometry”, The First IPM Conference on Theoretical Aspects of Computer Science (**IPM-TACS 2012**), joint work with J. Habibi.
- “Signed Network Formation Games”, The First IPM Conference on Theoretical Aspects of Computer Science (**IPM-TACS 2012**), joint work with J. Habibi.
- “Social Networks and Their Applications in Humanities Research” in Persian, **invited speaker** to Institute for Humanities and Cultural Studies.
- “Complexity Theory and Zero Knowledge” in Persian, **invited speaker** to Iran’s Society of Encryption, Joint work with MohammadSadegh Dousti, Fall 2009.
- Numerous lectures on “Driver Model in Linux Kernel”, Workshop in ISIRAN Company, Spring 2007.

## SKILLS

- Programming: C/C++, Java, Python.
- Algorithm Design, Clean Code.
- Data Mining, Machine Learning and LLMs, Mining Massive Datasets
- Big Data: Apache Hadoop Infrastructure.
- Web Development: Javascript, HTML, CSS, Django, Spring.
- Software Engineering: Software Architecture Templates, Design Patterns, OO Design and Analysis (USDP, RUP), Software Project Management, DevOps Culture
- DevOps and Automating Tools: Docker, Gitlab, Gitlab-CI, Ansible, Selenium, Familiar with Kubernetes
- Modeling Language: UML, Familiar with BPMN 2.0.
- Micro: AVR, 8085, ARM.
- Operating Systems: Linux + Mac OS X (Bash, Shell Scripting), Windows.
- Writing: LaTeX, MS Word.
- Language: Fluent in English and Persian.

**last update: February 3, 2025**