

Curriculum Vita

Saeed Jalili (PhD)
Associate Professor
Computer Engineering Department
Electrical and Computer Engineering Faculty
Tarbiat Modares University

Taught Courses

- Graduate Courses : Machine Learning, software Architecture Analysis & Design, Advanced Symbolic Processing, Advanced Operating System, Advanced Software Engineering, Knowledge Based Systems, Symbolic Processing, Distributed Systems
- Undergraduate Courses : Artificial Intelligence, Comparative Programming Languages, Software Engineering

Research Interests

- 1- Machine Learning (Data Mining)
- 2- Software Engineering
 - Search-based Software Engineering
 - Search-based Software Architecture Design & Evaluation
 - Decentralized Self-adaptive Software Design
 - Software Runtime Verification
 - Automatic Software Design Using Design Patterns
 - Automatic Test Case Generation and Automatic Testing
 - Source Code and Architecture Conformance Verification
- 3- Security (and Computer Network)
 - Intrusion Detection Systems
 - Cryptography Protocol Verification
 - Security Policies and Security Devices Configuration Conformance Verification
 - Anomaly Detection in Ad Hoc Wireless Networks
 - Anomaly Detection in IoT (RPL-based networks)

PhD and MSc Students

PhD

Graduated:

Tork Ladani, 2004
Seyed Morteza Babamir, 2007
Mahdi Abadi, 2008
Gholamreza Shahmohammadi, 2010
Narges Khakpour, 2012
Sama Goliaei, 2012
Mohammad Rahmanimanesh, 2012
Seyed Mohammad Hossein Hashemi Nejad, 2012
Reza Mortazavi, 2015
Ali Gholami Rudi, 2015
Saeed Shahrivari, 2016
Amir Lakizadeh, 2016
Hojat Jahani, 2018
Asghar Tajoddin (2nd Supervisor), 2019

Current Students:

Koshan Abedian, 2015
Osama Hourani (2nd Supervisor), 2016
Abdo-Allah chihade, 2016
Seyed Hossein Alavi, 2016
Fateme Yousefi Nejad, 2019

MSc

Graduated: 80

Current Students:

Mohadethe Jalili Sanjarani, 2018
Kaveh Mohamadi, 2018
Fateme sadat Hashemi, 2018
Ali Alemi Matinpour, 2018
Amin Hemati, 2018

Journal Papers
(67 English and 15 Persian)

1. S.Jalili and M.Abadi, ' An Ant Colony Optimization Algorithm for Network Vulnerability Analysis', Iranian Journal of Electrical and Electronic, PP.106-120, Vol.2, No.3-4, July 2006
2. S.Jalili and M.Abadi, ' using binary particle swarm optimization for minimization analysis of Attack Graphs', Scientica Iranica, PP.605-619, Vol.15, No.6, November-December 2008 (ISI)
3. S.Jalili and M.Abadi, 'Minimization Analysis of Network Attack Graphs using Genetic Algorithms', International Journal of Computers and their Application, PP.263-273, Vol.15, No.4, December 2008
4. S.Jalili and N.Khakhpour, 'Verification of Distributed Firewalls Configuration VS Security Policies Using ICQL', Applied artificial Intelligence An International Journal, PP.945-975, Vol.23, No.11, November 2009 (ISI)
5. S.Jalili and G.R.Shahmohamadi, 'A quantitative evaluation of maintainability of software architecture styles', Amirkabir Journal, PP.29-38, Vol.41, No.2, Fall 2009
6. S.Jalili and M.Babamir, 'Synthesizing Specification-based Monitor for Safety Requirements', Iranian Journal of Science & Technology, PP.235-256, Vol.23, No.3, June 2010 (ISI)
7. S.Jalili and M.Babamir, 'Making real-time Systems fault Tolerant: a Specification-based Approach', Journal of Scientific & Industrial Research, PP.501-509, Vol.69, No.7, July 2010 (ISI)
8. S.Jalili, G.Shahmohamadi and S.M.Hasheminejad, ' Identification of System Software Components Using Clustering Approach', Journal of Object Technology, PP.77-98, Vol.9, No.6, November 2010 (Scopus)
9. S.Jalili and S.Goliaei, 'An Optical Solution to the 3 -SAT Problem using Wavelength Based Approach', Journal of Supercomputing, November 2010 (ISI)
10. S.Jalili, S.H.Ahmadinejad and M.Abadi, 'A hybrid model for correlating alerts of known and unknown attack scenarios and updating attack graphs', Computer Networks, Elsevier, Vol.55, NO.9, June 2011 (ISI)
11. S.Jalili, S.M.Hasheminejad, Design Patterns Selection: An Automatic two-phase method, Elsevier - The Journal of Systems and Software, pp-408-424, Vol.85, No.2, Feb.2012 (ISI)
12. S.Jalili, N.Khakhpour, C.Talcott, M.SirJani and M.Mousavi, ' Formal Modeling of Evolving Self-adaptive System', Science of Computer Programming, pp.3-26, Vol.27,2012 (ISI)
13. S.Jalili and M.H Zangooei, ' PSSP with dynamic weighted Kernel Fusion based on SVM-PHGS', Knowledge-Based Systems, pp.424-442, Vol.207, March2012 (ISI)
14. S.Jalili and M.Abadi, ' A Particle Swarm Optimization Algorithm for Minimization Analysis of cost-Sensitive Attack Graphs', The International Journal of Information security, Isecure, pp.13-32, Vol.2, No.1, 2012 (ISC)
15. S.Jalili and M.Khaxar, WSCMon: run time monitoring of web services orchestration based on refinement checking', Service Oriented Computing and Application Vol.6, No.1, 2012 (Scopus)
16. S.Jalili and M.H Zangooei, ' Protein Secondary Structure Prediction using DWKF based on SVR-NSGAI', Neurocomputing, pp.87-101, Vol.94, 2012 (ISI)
17. S.Jalili, N.Khakhpour, M. SirJani, U.Goltz and B.Abolhasanzadeh, ' HPobSAM for modeling and analyzing IT Echo system - Through a case study', The Journal of Systems and Software, pp.2770-2784, Vol.85, 2012 (ISI)
18. S.Jalili, S.Goliaei and J. Salimi Sartakhti, 'A Light-Based Solution for Dominating Set Problem', Applied optics, pp.6979-6983, Vol.51, No.29, 2012 (ISI)
19. S.Jalili, J. Salimi Sartakhti' and A.Gholami Roudi, ' A new light-based solution to the Hamiltonian path problem', Future Generation Computer Systems, pp. 520-527, Vol.29, No.2, February 2013 (ISI)
20. S.Jalili, H.Masoud, and S.M.Hasheminejad, 'Dynamic clustering using combinatorial particle swarm optimization', Applied Intelligence, pp. 289-314, Vol.38 , No.3, April 2013 (ISI)
21. S.Jalili and A.Gholami Roudi, 'A parallel optical implementation of arithmetic operations', Optics & Laser Technology, pp. 173-182, No.49, July 2013 (ISI)
22. S.Jalili and M.Rahmanimanesh, 'Adaptive Ordered Weighted Averaging for Anomaly Detection', Iranian Journal of Fuzzy systems, pp. 83-109, Vol.10, No.2, 2013 (ISI)
23. S.Jalili and M.H Zangooei, ' Protein fold recognition with a two-layer method based on SVM-SA, WP-NN and C4.5 (TLM-SNC)', Int. Journal of Data Mining and Bioinformatics, pp. 203-223, Vol.8, No.2, 2013 (ISI)
24. S.Jalili and S.M.Hasheminejad, ' SCI-GA: Software Component Identification using Genetic Algorithm', Journal of Object Technology, pp. 1-34, Vol.12 , No. 2, 2013 (Scopus)

25. S.Jalili, A.Gholami Rudi, S.Shahrivari and Z.Kashani, 'RANGI: A Fast List-Colored Graph Motif Finding Algorithm', *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, pp. 504-513, Vol.10 No.2, March 2013 (ISI)
26. S.Jalili and S.Goliaei, 'An Optical Wavelength-Based Computational Machine', *International Journal of Unconventional computing*, pp.97-123, Vol.9, 2013 (ISI)
27. S.Jalili, R.Mortazavi and H.Gohargazi, 'Multivariate micro aggregation by iterative optimization', *Applied Intelligence*, pp.529-544, Vol.39, No.3, 2013 (ISI)
28. S.Jalili and A.Gholami Rudi, 'A parallel optical implementation of arithmetic operations', *Optics and Laser Technology*, pp. 173-182, Vol.49, 2013 (ISI)
29. S.Jalili, H.Masoud and S.M.Hasheminejad, 'Dynamic clustering using combinatorial particle swarm optimization', *Applied Intelligence*, pp.289-314, Vol.38, No.2, 2013 (ISI)
30. S.Jalili and M.Rahmanimanesh, 'Adaptive ordered weighted averaging for anomaly detection in cluster-based mobile ad hoc network', *Iranian Journal of Fuzzy Systems*, pp.83-109, Vol.10, No.2, 2013 (ISI)
31. S.Jalili, M.Rahmanimanesh and A.R.Sharafat, 'Fusion of one-class classifiers for protocol-based anomaly detection in AODV-based mobile ad hoc networks', *International Journal of ad hoc and Ubiquitous Computing*, pp.158-171, Vol.14, No.3, 2013 (ISI)
32. S.Jalili and H.Masoud, 'A clustering-based model for class responsibility assignment problem in object-oriented analysis', *Journal of Systems and Software*, pp.110-113, No.93, 2014 (ISI)
33. S.Jalili and R.Mortazavi, 'Fast data-oriented microaggregation algorithm for large numerical datasets', *Knowledge-based Systems*, pp.195-205, No.67, 2014 (ISI)
34. S.Jalili and S.M.Hasheminejad, 'An evolutionary approach to identify logical components', *Journal of Systems and Software*, pp.24-50, No.96, 2014 (ISI)
35. S.Jalili, A.Chahade, S.M.Hasheminejad and M.H.Zangoeei, 'Source Code and Design Conformance, design pattern detection from source code by classification approach', *Applied Soft Computing*, pp.357-367, Vol.26, 2015 (ISI)
36. S.Jalili and S.M.Hasheminejad, 'CCIC: Clustering analysis classes to identify software components', *Information and Software Technology*, pp.329-351, No.57, 2015 (ISI)
37. J.Nassiri, N.M.Charkari and S.Jalili, 'Least Squares Twin Multi-class Classification Support Vector Machine', *Pattern Recognition*, pp.984-992, Vol.48, No.3, 2015 (ISI)
38. S.Jalili and R.Mortazavi, 'A novel local search method for microaggregation', *The ISC International Journal of Information Security*, pp.1-12, Vol.7, 2015 (ISC)
39. S.Jalili and N.Shakeri, 'A 2-dimensional optical architecture for solving Hamiltonian path problem based on micro ring resonators', *Optics and Laser Technology*, pp.56-65, Vol.65, 2015 (ISI)
40. S.Jalili, H.Gohargazi and M.Rahmanimanesh, 'Routing anomaly detection in OLSR-based MANETs', *International Journal of Mobile Communications*, pp.276-298, Vol.13, No. 3, 2015 (ISI)
41. S.Jalili and S.Shahrivari, 'High-performance parallel frequent subgraph discovery', *Journal of Supercomputing*, pp.2412-2432, Vol.71, No7, 2015 (ISI)
42. S.Jalili and F.Golzari, 'VR-BFDT: A variance reduction based binary fuzzy decision tree induction method for protein function prediction', *Journal of Theoretical Biology*, pp.10-24, No.377, 2015 (ISI)
43. S.Jalili and A.Lakizadeh and S.A.Marashi, 'CAMWI: Detecting Protein Complexes using Weighted Clustering Coefficient and Weighted Density', *Computational Biology and Chemistry*, PP231-240, Vol. 58, 2015 (ISI)
44. S.Jalili and A.Gholami Rudi, 'Image preprocessing with a parallel optoelectronic processor', *Computers & Electrical Engineering*, pp.554-565, Vol.46, 2015 (ISI)
45. S.Jalili, A.Lakizadeh and S.A. Marashi, 'PCD-GED: Protein complex detection considering PPI dynamics based on time series gene expression data', *Journal of Theoretical Biology*, pp.31-38, No.378, 2015 (ISI)
46. S.Jalili and R.Mortazavi, 'Preference-based anonymization of numerical datasets by multi-objective microaggregation', *Information Fusion*, pp.85-104, Vol.25, 2015 (ISI)
47. S.Jalili and S.Goliaei, 'Computation with optical sensitive sheets', *Natural Computing*, pp.437-450, Vol. 14, No.3, 2015 (ISI)
48. S.Jalili and S.Shahrivari, 'Distributed Discovery of Frequent Subgraphs of a Network using MapReduce', *Computing*, pp.1101-1120, Vol. 97, No.11, 2015 (ISI)

49. S.Jalili, V.Tawossi and S.M.Hasheminejad, 'Automated software design using ant colony optimization with semantic network support', *Journal of Systems and Software*, pp.1-17, No.109, 2015 (ISI)
50. S.Jalili and S.Shahrivari, 'Fast Parallel All-Subgraph Enumeration Using Multicore machines', *Scientific Programming*, pp.1-12, Vol. 2015, 2015 (ISI)
51. S.Jalili and S.Shahrivari, 'Single-pass and linear-time K-means clustering based on MapReduce', *Information Systems*, pp.1-12, Vol. 60, No.1, 2016 (ISI)
52. S.Jalili and R.Mortazavi, 'Enhancing aggregation phase of microaggregation methods for interval disclosure risk minimization', *Data Mining and Knowledge Discovery*, pp.605-639, Vol. 30, No.3, 2016 (ISI)
53. S.Jalili and A.Lakizadeh, 'BiCAMWI: A Genetic-Based Biclustering Algorithm for Detecting Dynamic Protein Complexes', pp.1-16, Vol. 11, No.7, 2016 (ISI)
54. S.Jalili and B. Abolhasanzadeh, 'Towards modeling and runtime Verification of Self-Organizing Systems', *Expert Systems with Applications*, pp.230-244, Vol. 44, 2016 (ISI)
55. S.Jalili, F.Karimi-Alavijeh and M.Sadeghi, 'Predicting metabolic syndrome using decision tree and support Vector Machine Methods', *ARYA Atheroscler*, pp.146-152, Vol. 12, No. 3, 2016 (ISC, Scopus)
56. S.Jalili and H.Jahani, 'A Novel Passive Website Fingerprinting Attack on Tor Using Fast Fourier Transform', *Computer Communications*, pp.43-51, Vol. 96, 2016 (ISI)
57. S.Jalili, M.Salari, and R.Mortazavi, 'TBM a transformation based method for microaggregation of large volume mixed data', *Data Mining Knowledge Discovery*, pp.65-91, No. 31, 2017 (ISI)
58. S.Jalili, S.M.Bidoki and A.Tajoddin, 'PbMMD A novel policy based multi-process malware detection', *Engineering Applications of Artificial Intelligence*, pp.57-70, No. 60, 2017 (ISI)
59. H.Shakibian, N.Moghadam Charkari and S.Jalili, 'A multilayered approach for link prediction in heterogeneous complex networks', *Journal of Computational Science*, pp.73-82, Vol. 17, 2016 (ISI)
60. S.Jalili and R.Mortazavi, 'Fine granular proximity breach prevention during numerical data anonymization', *TRANSACTIONS ON DATA PRIVACY*, pp.117-1144, Vol. 10, No. 2, 2017 (Scopus)
61. S.Jalili and A.Lakizadeh, 'A Novel Measure for Semantic Similarity Computation of Gene Ontology Terms Using Weighted Aggregation of Information Contents', *Open Acces, Zahedan J. Res. Med. Sci.*, Vol. 19, No.8, e12041, 2017 (ISC)
62. S.Jalili and O.Nikdelfaz, 'Disease genes prediction by HMM based PU-learning using gene expression profiles', *Journal of Biomedical Informatics*, pp.102-111, No. 81, 2018 (ISI)
63. S.Jalili and A.Tajoddin, 'HM3alD Polymorphic Malware Detection Using Program Behavior-Aware Hidden Markov Model', *MDPI Applied Sciences*, Open Acces, pp.1-23, No. 8,1044, 2018 (ISI)
64. S.Jalili and A.Vasighizaker, 'C-PUGP - A Cluster-based positive unlabeled learning method for disease gene prediction and prioritization', *Journal of Computational Biology and Chemistry*, pp.23-31, No. 76, 2018 (ISI)
65. S.Jalili and H.Jahani, 'Online Tor Privacy Breach Through Website Fingerprinting Attack', *Journal of Network and Systems Management*, Published Online: 04 July 2018 (ISI)
66. S.Jalili and J. Salimi Sartakhti, 'On the computational power of the light: A plan for breaking data encryption standard', *Theoretical Computer Science*, pp.71-78, No. 773, 2019 (ISI)
67. S.Jalili and H.Jahani, 'Effective defense against fingerprinting attack based on autocorrelation property minimization approach', *Journal of Intelligent Information Systems*, , Published Online: 13 March 2019 (ISI)

Conference Papers
(37 English and 116 Persian)

1. S.Jalili and M.Abadi, 'Applying Genetic Algorithms for Minimization Analysis of Network Attack Graphs', 11th ICCSI, 2006
2. S.Jalili and M.A.Khan, 'Tracing Anonymous Packets to Their Sources: Based on Packet Marking', 11th ICCSI, 2006
3. M.Valizadeh, E.Kabir and S.Jalili, 'Fusion of Gabor and co-occurrence texture features for document image regions classification', 2th Conference on Fuzzy System and Intelligent, 2006
4. M.Shahverdi, S.Jalili and A.Badkoubi, 'Expert system in activated sludge process', Water Pollution VII, 2003
5. S.Jalili and M.Babamir, 'Dynamic Analysis of Object-Oriented Programs Using State Machines and ECA Rules', ISCA, 14th International Conference on Intelligent and Adaptive System, 2005
6. S.Jalili and M.Abadi, 'Network Intrusion Detection Using One-Class Classification', IST2005, International Symposium on Telecommunications, 2005
7. S.Jalili and M.Abadi, 'Automatic Discovery of Network Attack Scenarios Using SPIN Model Checker', IST2005, International Symposium on Telecommunications, 2005
8. S.Jalili and M.Babamir, 'Monitoring Message Ordering in Group Communication Using Run Time Verification', IST2005, International Symposium on Telecommunications, 2005
9. S.malakotikhah and S.Jalili, 'AECM: an Aspect Enabled Component Model, 12th IEEE APSEC 2005', Asia-Pacific Software Engineering Conference, 2005
10. S.Jalili and M.Babamir, 'A Logical Based Approach to Detection of Intrusions against Programs', ICGeS2006, 2nd Annual International Conference on Global e-Security, 2006
11. S.Jalili and M.Abadi, 'Analyzing Network Attack Graphs Using Ant Colony Optimization', ICGeS2006, 2nd Annual International Conference on Global e-Security, 2006
12. S.Malakotikhah and S.Jalili, 'A Two-Layer Framework to Support Minimized Extendable Components', 12th Iranian Computer Society Conference, 2006
13. S.Malakotikhah and S.Jalili, 'Integration of Aspect-Oriented and Domain Engineering to Improve Artifacts Reusability', 15th Iranian Electrical & Electricity Conference, 2007
14. S.Jalili and M.MirzaAghaei, 'RVERL : Runtime Verification of Real-time and Reactive Programs with Real-time Logic Approach', International Conference on Software Engineering Research, 2007
15. S.Jalili and M.MirzaAghaei, 'RVERL : Runtime Verification of Real-time and Reactive Programs using Event-based Real-time Logic', International Conference on Software Engineering Research, 2007
16. S.Jalili, M.Abadi and P.Mahdabi, 'A multi-start quantum-inspired evolutionary algorithm for solving combinatorial optimization problems', GECCO'08, 2008
17. M.Valizadeh, E.Kabir and S.Jalili, 'An efficient hierarchical method for text region extraction in degraded document images', 5th Computer Vision & Image Processing Conference, 2008
18. S.Jalili and N.Khakhpour, 'using supervised and transductive learning techniques to extract network attack scenarios', 14th Iranian Computer Society Conference, 2009
19. P.Mahdabi, S.Jalili and M.Abadi, 'A Novel Quantum-Inspired Evolutionary Algorithm for solving Combinatorial Optimization Problems', GECCO'09, 2009
20. N.Armanfard, S.Jalili, R.KomeiliFonod and E.Kabir, 'A non-parametric pixel-based background modeling for dynamic scenes', ACTEA2009, 2009
21. M.Khaxar, S.Jalili and N.Khakhpour, 'Monitoring Safety Properties of Composite Web Services at runtime using CSP', Enterprise Distributed Object Computing Conference, 2009
22. S.Jalili and H.Ahmadinejad, 'Alert correlation using correlation probability estimation and time windows', IEEE Int. Conference on computer technology and development, 2009
23. S.Goliaei and S.Jalili, 'An Optical Wavelength-Based Solution to the 3-SAT Problem', 2nd International Workshop on Optical supercomputing, 2009
24. S.Jalili, N.Khakhpour, C.Talket, M.Sirjani and M.Mousavi, 'PobSAM: Policy-based Managing of Actors in Self-Adaptive Systems', 6th workshop on Formal Aspects of Component Software. FACS 2009, 2009
25. S.Jalili and H.Ahmadinejad, 'Correlating Alerts into Compressed Graphs Using an Attribute-Based Method and Time Windows', International Conference on Security Technology, 2009
26. N.Khakhpour, M.Sirjani and S.Jalili, 'Formal Analysis for Smart Home Policies Using Compositional Verification', 10th Feature Interactions in Software and Communication Systems, 2009
27. S.Jalili and S.Goliaei, 'Optical Graph 3-Colorability', 3rd International Workshop on Optical Supercomputing, OSC2010, 2010
28. S.Jalili, H.Masoud and S.M.Hasheminejad, 'A clustering based model for class responsibility assignment problem', The International Conference on contemporary issues in Computer and information Science, 2012

29. S.Jalili and H.Gohargazi, 'A Hybrid method for collusion attack detection in OLSR based MANETs', The International Conference on contemporary issues in Computer and information Science, 2012
30. S.Jalili, Sh.Asgharian and M.Rahmanimanesh, 'Anomaly detection based on an enhanced projection distance', 6th International Symposium on Telecommunications With Emphasis on Information & Communication Technology, 2012
31. M.Shakeri Miyandareh and S.Jalili, 'VOIP Anomaly Detection by combining OCSVM and PSO algorithm', 6th International Symposium on Telecommunications With Emphasis on Information & Communication Technology, 2012
32. S.Jalili, H.Gohargazi and M.Rahmanimanesh, 'Ordered feature fusion for anomaly detection in OLSR-based Manets', 9th Iranian Cryptography Society Conference, 2012
33. S.Jalili, Sh.Asgharian and M.Rahmanimanesh, 'Anomaly detection based on fuzzy C-means clustering and principle component analysis', 12th Iranian Fuzzy Systems Conference, 2012
34. M.Mohabati, S.Jalili and A.M.Mourkani, 'A Light-based architecture for solving Hamiltonian Path Problem (HPP)', 2nd Asian symposium on Electromagnetics and photonics Engineering, Tabriz, Iran, 2013
35. M.Mourkani, S.jalili and M.Mohabati, 'A Light-based Two dimensional architecture for Solving the Hamiltonian Path Problem (HPP)', 2nd Asian symposium on Electromagnetics and photonics Engineering, Tabriz, Iran, 2013
36. S.Jalili, M.Salari and R.Mortazavi, 'A Utility Preserving Data-oriented Anonymization Method Based on Data Ordering', 7th International Symposium on Telecommunications (IST), 2014
37. S.Jalili and B.Hoseini, 'Automatic Test path generation from sequence diagram using genetic algorithm', 7th International Symposium on Telecommunications (IST), 2014