

Majid Vafaei Jahan (M. Vafaei Jahan)



Ph.D, Associate Professor, Software Engineering & Intelligent Systems

Birth: 9 August 1976, Mashhad, Iran

Address: Department of Computer Engineering; Mashhad Branch - Islamic Azad University, Mashhad, Iran;

Office Phone: 0098-051-36632465

Cell Phone: 0098-915-314-1659

Orcid <http://orcid.org/0000-0001-8891-877X>

Email Address: VafaeiJahan@mshdiau.ac.ir
VafaeiJahanMajid@gmail.com
mVafaeiJ@sfu.ca
VafaeiJa@yahoo.com

Skype Majid V. Jahan, live:c7c68b0874bf396d

Current Position **Associate Professor** at Department of Computer Engineering, Islamic Azad University, Mashhad Branch;
Head of IAUM Big Data & Blockchain Technology LAB.

Current Projects and Funds

Topics	Start Date	Progress	FULL Funded
Adaptive model-based behavior of investors in financial markets based on news events. Processing Smart Contract Severin Co. 2 Journal Paper submitted. Funds with Iran MSRT.	2016-	90%	-
Modeling Financial Time Series Based on Multi Fractal Correlation Analysis. Processing Smart Contract Severin Co. 1 Journal Paper submitted	2016-	80%	-
Designing a Private Organization Blockchain IAUM + Processing Smart Contract Severin Co.	2018	30%	-
Detection Malware and destructive attacks on web servers (Statistical and Process Analysis). IAUM Technology center 6 ISI Journal Paper Published	2011-2017	Finished	
SAIGA: Fast distributed Big Data Analysis of Financial series based on Risk/Return Asset correlations.	2007-2016	Finished	

Processing Smart Contract Severin Co.
With 6 ISI-Journal Paper Published.

This App was successful at Market Trading Strategist
Competition by FBS Broker at 2018.

**Analysis of Financial time series based on Profile Hidden
Markov Model,**

2013-2015 Finished

1 ISI-Journal Paper Published.

Teaching

Big Data Analysis and Modeling (MSc, PhD)

(Big Data Analysis, Time Series Fundamentals, n-order Markov Model , Alignment Algorithms, Markov Decision Process, Bayesian Networks, ...)

BlockChain and Cryptography Technology (MSc, PhD)

(Theory of Blockchain, Fundamental of Crypto Security, Distributed ledgers, Peer to peers and Stratum Protocol, ...)

Mastering Design Organizational Private BlockChain (PhD)

(Smart Contracts and Solidity, Hyperledger fundamental and Fabric, ...)

Computer Evaluation, Modeling and Simulation (MSc, PhD)

(Markov Models, DTMC, CTMC, Hidden Markov Model, Profile HMM, Queue Theory, ...)

Computer Simulation and Modeling (BSc, MSc)

(Monte Carlo simulation, Markov Chain Monte Carlo, Queue Simulation, ...)

Engineering Mathematics in Software Engineering (MSc)

(Bayesian Network, Random Number Generation, Stochastic Test Methods, ...)

Soft Computing (MSc)

(Fuzzy Inference, Neural Networks, evolutionary Computing, ...)

Learning Automata (MSc)

(Learning Automatas, ...)

Analysis and Design Algorithms (BSc)

Database Systems (BSc)

Work Background

1999-2002 Software Programmer of MultiUtility Billing System, Micronage Corporation, Tehran, Office, Iran.

2002-2004 Information Technology Consultant, Toklan Toos Corporation, Mashhad, Iran.

2004 (Active Service) Organizing Manager, Internal Robocup Simulation League, Islamic Azad University – Mashhad Branch, Mashhad, Iran.

2004-2005 Information Technology Consultant, Paya System Marv Corporation, Mashhad, Iran.

- 2005-2009** Executive Manager, Journal of Technical Engineering, Islamic Azad University, Mashhad, Iran.
- 2001-...** Faculty Member, Islamic Azad University, Mashhad Branch, Iran.
Computer Engineering Dept.
- 2007-....** Project Manager of SAIGA, Stock/Forex/Digital Currency Investor advisor Application, Processing Smart Contract Co.
Mashhad, AhmadAbad, Adrina Building, No.1.
- 2011-2012** (Active Service) Head of Computer Engineering Department, Islamic Azad University, Mashhad, Iran.
Computer Engineering Dept. Floor No.1.
- 2012-2017** (Active Service) Engineering Department Research and Technology Dean, Islamic Azad University, Mashhad, Iran.
Engineering Dept. Floor No.2.
- 2013-....:** (Active Service) Founder and Head of the High Performance Computing (HPC) Center, Engineering Department, IAUM.
- 2015-.....:** (Active Service) Editorial board, IAUM Journal of Technical Engineering
- 2017-2018** Visiting Associate Professor at Simon Fraser University (SFU) CANADA with Prof. Uwe Glasser, Maritime project, Vessel Trajectory Detection.
Simon Frazer University, Applied Science Dept, TASC 1 9201.
- 2018-...** Designing Private Block Chain to secure data management at IAUM Big Data & Blockchain Technology lab.
Computer Engineering Department, Blockchian Tech Lab, 3012.
- 2018-2020** Founder and Head of the Currency Mining Farm, Processing Smart Contract (PSC) Severin Co, Mashhad, Fanavaran Industrial City.
Startup 240 GPU Miner – 50 ASIC Miner.
Startup Full-Node center of Bitcoin Blockchain.
Startup Full-Node center of Ethereum Blockchain.

Education Background

Doctor of Philosophy (Ph.D)

2006-2010

Software Systems, The Islamic Azad University – Science and Research Branch, Tehran, Iran; Dissertation Topic is “**Spin Glasses for Solving Optimization Problem and its applications**”.

Supervisor: Prof. M.R. Akbarzadeh-T. Advisor: Prof. N. ShahTahmasbi

Masters of Science (M.sc) 1999-2002

Software Engineering, The Sharif University of Technology, Tehran, Iran; Dissertation Topic is “**Application of Component Object Model in Distributed Simulation**”.

Supervisor: Assistant Prof. J. Habibi. Advisor: Prof. M. Movaghar.

Bachelors of Science (B.sc) 1994-1998 Software Engineering, The Ferdowsi University of Mashhad, Mashhad, Iran; Dissertation Topic is “**Design and Implementation of Compact Database on a CD (the 1047 Books on one CD)**”.
Supervisor: Prof. Deldari

Research Interests

Big Data Analysis and Modeling, BlockChain Technology, Markov Modeling, Software Simulation, Complex Systems Modeling, Soft Computing, Evolutionary Computation.

Awards

- 1999 **Outstanding Graduate Student in Computer Engineering Department Award** at Ferdowsi University of Mashhad.
- 2012 **The Best Top Researcher Award in engineering field** at Islamic Azad University Mashhad Branch.
- 2012 **The Best top Published Book Writer Award** at the 9th region of Islamic Azad university.
- 2012 **The Best Top Published Paper Award** at the 9th region of Islamic Azad university.
- 2013 **The Top Teacher Award** at Islamic Azad University – Mashhad Branch in teacher’s day Celebration.
- 2014 **The Top Researcher Award** at Islamic Azad University – Mashhad Branch.

Publication

Books

- “**Professional UML**” (In Persian), Majid Vafaei Jahan, Islamic Azad University Press, summer 2007, (ISSN: 978-964-477- 502-4).
- “**Modeling and Simulation of Computer Systems**” (In Persian), Majid Vafaei Jahan, Islamic Azad University Press, Fall, 2011, (ISSN:987-600-247-030-0).
- “**Modeling and Simulation of Computer Systems (Second Edition)**” (In Persian), Majid Vafaei Jahan, Islamic Azad University Press, Spring, 2015, (ISSN:987-600-247-030-0).
- “**Big Data Analysis**” (in Persian), Majid Vafaei Jahan, Islamic Azad University Press, 2019, Under Print.

Publication

Journal Papers

- 1 M.Vafaei Jahan, M.R. Akbarzadeh Totonchi, "**From Local Search to Global Conclusions: Migrating Spin Glass-based Distributed Portfolio Selection**," Journal of IEEE Transaction on Evolutionary Computation, No. 14, Issue 4, 591-601, August 2010.
- 2 M. Vafaei Jahan, M.R. Akbarzadeh Totonchi, "**Extremal Optimization vs. Learning Automata: Strategies for Spin Selection in Portfolio Selection Problems**," Applied Soft Computing, Volume 12, Issue 10, pp:3276–3284, October 2012
- 3 M. Vafaei Jahan, M.R. Akbarzadeh Totonchi, "**Composing Local and Global Behavior: Higher Performance of Spin Glass Based Portfolio Selection**," Journal of Computational Science, Vol 3, Issue 4, pp:238-245, July 2012.
- 4 S.M. Hosseini, H. Karimi, M. Vafaei Jahan, "**Generating pseudo-random numbers by combining two systems with complex behaviors**," Journal of information security and applications, Vol. 19, pp:149-162, 2014.

- 5 M. Vafaei Jahan, S. M. S. Kenari, "**Spin Glass Automata (SGA): An Evolutionary Local Search Automata for Solving Optimization Problems**," American Journal of Intelligent Systems, No. 1, Vol. 1, pp:1-9, 2011.
- 6 M. Vafaei Jahan, "**Multi Scale Spin Glass Based Portfolio Selection**," Advances in Computing, No. 1, Vol. 2, pp:6-11, 2012.
- 7 M. Vafaei Jahan, M.R. Akbarzadeh Totonchi, "**Hybrid local search algorithm via evolutionary avalanches for spin glass based portfolio selection**," Egyptian Informatics Journal, Vol. 13, Issue 2, pp:65-73, 2012.
- 8 M. Bazghandi, G. Tadayon Tabrizi, M. Vafaei Jahan, "**Extarctive Summarization Of Farsi Documents Based On PSO Clustering**," International Journal of Computer Science Issues, Vol 9, Issue 4, pp:329-332, 2012.
- 9 Afsoon Assa, M. Vafaei Jahan, "**Adaptive Scheduling in Wireless Sensor Networks Based on Potts Model**", American Journal of Intelligent Systems, Vol. 2 No. 7, 2012, pp. 157-162.
- 10 H. Soltanpoor, M. Vafaei Jahan, M. Jalali, "**Graph-Based Image Segmentation Using Imperialist Competitive Algorithm**," Advances in Computing, No. 2, Vol. 3, pp:11-21, 2013.
- 11 S. Nozarian, M. Vafaei Jahan, M. Jalali, "**An Imperialist Competitive Algorithm for 1-D Cutting Stock Problem**," International Journal of Information Science, No. 2, Vol. 3, pp: 25-36, 2013.
- 12 H. Karimi, S. M. Hosseini, M. Vafaei Jahan, "**On the Combination of Self-Organized Systems to Generate Pseudo-Random Numbers**," Information Sciences, Volume 221, pp:371–388, 2013.
- 13 M. Vafaei Jahan, M.R. Akbarzadeh Totonchi, N. Shahtahmassbi, "**A study of phase transitions for convergence analysis of spin glasses: application to portfolio selection problems**," Springer Soft Computing Journal, Volume 17, Issue 10, pp 1883-1892, 2013.
- 14 M. Nosratabadi, M. Vafaei Jahan, M.R. Akbarzadeh Totonchi, "**A Multi-Objective Fuzzy Job Shop Scheduling by Extremal Optimization**," International Journal of Industrial Engineering & Production Management, Vol 24, No 3, pp: 327-338, 2013.
- 15 I. Akbari, M. Ghoreishi, N. Razavi, M. Ghoreishi, M. Vafaei Jahan, "**Modeling and Optimization of Hydrogen Production Plant via Artificial Neural Network and Genetic Algorithm**," Vol. 7, No. 4, Journal of Applied Research in Chemistry – JARC, 2014.
- 16 N. Maleki, M. Jalali, M. Vafaei Jahan, "**Adaptive and non-adaptive data hiding methods for grayscale images based on modulus function**," Egyptian Informatics Journal, Volume 15, Issue 2, July 2014, Pages 115–127.
- 17 S.M. Hosseini, H. Karimi, M. Vafaei Jahan, "**Pseudo-Random Number Generation Based on Cellular Automata And Longton Ants**," Biannual Journal of Information Technology on Engineering Design, Volume 6, No. 2, Fall & Winter 1392.
- 18 M. Geraily, M. Vafaei Jahan, S. Rahati Quchani, "**Fuzzy Detection of Destructive Attacks on Web Applications Based on Hidden Markov Models Ensemble**," Biannual Journal of Information Technology on Engineering Design, Volume 6, No. 1, Spring & Summer 1392.
- 19 M. Zabihi, M. Vafaei Jahan, J. Hamidzadeh, "**A Density Based Clustering Approach to Distinguish Between Web Robot and Human Requests to a Web Server**," The ISC International Journal of Information Security, Volume 6, No. 1, pp: 1-13, 2014.
- 20 P. Barakati, M. Jalali, M. Vafaei Jahan, V. Amel Mahboob, "**Extracting edge centrality from social networks using heat diffusion algorithm**," International Journal of Knowledge-based and Intelligent Engineering Systems, Vol. 19, pp:69–82, 2015.
- 21 V. Amel Mahboob, M. Jalali, M. Vafaei Jahan, P. Barkati, "**Swallow: Resource and Tag Recommender System Based on Heat Diffusion Algorithm in Social Annotation Systems**," Computational Intelligence, Volume 0, Number 0, 2016.
- 22 M. Vafaei Jahan, F. Khosrojerdi, "**Text Encryption Based on Glider in the Game of Life**," International Journal of Information Science Vol. 6, No. 1, pp: 20-27, 2016.

- 23 A.S. Barmak, M. Vafaei Jahan, V. Mahmoodian, Z. Sadrnezhad, "**A Bi-Level Genetic Model for Competitive Capacitated Facility Location**," American Journal of Intelligent Systems, Vol. 6, No. 3, pp: 66-73, 2016.
- 24 V. Faridani, M. Jalali, M. Vafaei Jahan, "**Collaborative filtering-based recommender systems by effective Trust**," International Journal of Data Science and Analytics, pp:1-11, 2017;
- 25 M. Vafaei Jahan, M.R. Akbarzadeh-T, "**Spin Glasses, The Way to Distributed Processing, Case study on Stock Market Portfolio Selection**," Journal of Financial And Portfolio Management System, Vol. 8, Issue 32, pp: 87-109, 2017.
- 26 Z. Alamatian, M. Vafaei Jahan, "**Iran Stock Market Prediction Based on Bayesian networks and Hidden Markov Models**," Journal of Financial And Portfolio Management System, Vol. 8, Issue 33, pp: 283-298, 2018.
- 27 J Hajian Nezhad, M. Vafaei Jahan, M Tayarani-N, "**Analyzing New Features of Infected Web Content in Detection of Malicious Web Pages**," The ISC International Journal of Information Security, Volume 9, No. 2, pp: 63-83, 2017.
- 28 M. Vafaei Jahan, "**Feature Extraction of Files Structure by Statistical Analysis**," Journal of Signal and Data Processing, Volume 13, No. 4, pp:43-62, 2017.

Publication

Conference Papers

- E. Nikbakht, M.H Moattar, M. Vafaei Jahan, "**Verifying Malfunction Identification Base on GA Self-Adaptation**," The Tenth Iran Data Mining Conference, IDMC 2016, Tehran, Iran.
- E. Nikbakht, M.H Moattar, M. Vafaei Jahan, "**Survey on Malfunctions Detection Methods**," The 8th IEEE confernece Electical and Electronic Conference, Gonabad, 2016.
- R. Mirzazadeh , M.H Moattar , M. Vafaei Jahan, "**Metamorphic Malware Detection Using Linear Discriminant Analysis and Graph Similarity**," 5th IEEE International Conference on Computer and Knowledge Engineering, 2015.
- M. Fahimi, M. Vafaei Jahan, "**A Recommender System based on Discovering the Triadic Frequent Closed Patterns Using Hidden Markov Model in Folksonomy**," Second IEEE International Congress on Technology, Communication and Knowledge (ICTCK 2015) Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- A.Y. Niyat, R.M. Hei Hei, M. Vafaei Jahan, "**A RGB Image Encryption Algorithm Based On DNA Sequence Operation and Hyper-chaotic System**," Second IEEE International Congress on Technology, Communication and Knowledge (ICTCK 2015) Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- A.Y. Niyat, R.M. Hei Hei, M. Vafaei Jahan, "**Chaos-based image encryption using a hybrid cellular automata and a DNA sequence**," Second IEEE International Congress on Technology, Communication and Knowledge (ICTCK 2015) Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- Z. Alamatian, M. Vafaei Jahan, "**Predicting Iran Stock Market Behavior Based on Bayesian Network and HMM**," Second IEEE International Congress on Technology, Communication and Knowledge (ICTCK 2015) Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- N. R. Mashhadi, M. Jalali, M. Vafaei Jahan, "**Inference of mobile users'social relationships using Bayesian belief network**," Second IEEE International Congress on Technology, Communication and Knowledge (ICTCK 2015) Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- H. Divandari, B. Pechaz, M. Vafaei Jahan, "**Malware Detection Using Markov Blanket Based on Opcode Sequences**," Second IEEE International Congress on Technology, Communication and Knowledge (ICTCK 2015) Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- Z. Sadrneghad, M. Vafaei Jahan, "**Stock Market Prediction based on Iterative Patterns**," Second IEEE International Congress on Technology, Communication and Knowledge (ICTCK 2015) Mashhad Branch, Islamic Azad University, Mashhad, Iran.

- Z. Alamatian, M. Vafaei Jahan, "**Predicting preterm birth pregnant women using Bayesian Networks**," Computer Society of Iran, Ferdowsi University of Mashhad, Iran, March 2015.
- Z. Ghezelbiglo, M. Vafaei Jahan, "**Role-opcode vs. Opcode: the New method in Computer Malware Detection**," First International IEEE Congress on Technology, Communication and Knowledge (ICTCK 2014) November, 26-27, 2014 – Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- M. Zabihi, M. Vafaei Jahan, J. Hamidzadeh "**A Density Based Clustering Approach for Web Robot Detection**," The 4th International IEEE conference on Computer and knowledge Engineering (ICCKE 2014), Ferdowsi University, Mashhad, Iran.
- Z. Sadrnezhad, A. Nekouie, M. Vafaei Jahan "**Online Handwriting Farsi Character and Number Recognition Based on Hand Movement Direction Using Hidden Markov Models**," First International IEEE Congress on Technology, Communication and Knowledge (ICTCK 2014) November, 26-27, 2014 – Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- V. Faridani, M. Vafaei Jahan, M. Jalali "**Combining Trust in Collaborative Filtering to Mitigate Data Sparsity and Cold-Start Problems**," The 4th International IEEE conference on Computer and knowledge Engineering (ICCKE 2014), Ferdowsi University, Mashhad, Iran.
- N. Shabani, M. Vafaei Jahan, "**Metamorphic Virus Detection Based on Bayesian Network**," First International IEEE Congress on Technology, Communication and Knowledge (ICTCK 2014) November, 26-27, 2014 – Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- M. Fahimi, M. Vafaei Jahan, M. Niazi Torshiz, "**Discovery Of The Triadic Frequent Closed Patterns Based On Hidden Markov Model In Folksonomy**," First International IEEE Congress on Technology, Communication and Knowledge (ICTCK 2014) November, 26-27, 2014 – Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- S.H. Alizadeh, M. Vafaei Jahan, N.R. Arghami, "**A recommender system based on trust and semantics in collaborative systems using a new measure of association**," First International IEEE Congress on Technology, Communication and Knowledge (ICTCK 2014) November, 26-27, 2014 – Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- B. Pechaz, M. Vafaei Jahan, M. Jalali, "**Malware Detection Using Hidden Markov Model based on Markov Blanket Feature Selection Method**," First International IEEE Congress on Technology, Communication and Knowledge (ICTCK 2014) November, 26-27, 2014 – Mashhad Branch, Islamic Azad University, Mashhad, Iran.
- Z. Ghezelbiglo, M. Vafaei Jahan, "**Role-Opcode Vs. Opcode in Malware Detection**," The 11th conference on Computer and Intelligence Systems, Kish, Iran, 2014.
- M. Zabihi, M. Vafaei Jahan, "**Web Robot Detection By Markov Clustering**," The 7th Conference on Operation Research, Semnan University, Iran, 2014.
- J. Rajabnia, M. Vafaei Jahan, "**Web Robot Detection By ANFIS**," The 14th Conference on Iranian Association on Fuzzy Systems, Sahand University, Tabriz, Iran, 2014.
- J. Rajabnia, M. Vafaei Jahan, "**Fuzzy Inference of Web Robot Detection Based on Learning Machine Techniques**," National e-Conference on Advances Basic Science and Engineering, 2014
- F. Hasanzadeh, M. Jalali, M. Vafaei Jahan, "**Detecting communities in social networks by techniques of clustering and analysis of communications**," The 14th IEEE Conference on Intelligent Systems (ICIS), Iran, 2014.
- M. Zabihi, M. Vafaei Jahan, J. Hamidzadeh, "**Fuzzy Inference for Intrusion Detection of Web Robots in Computer Networks**," The 45th Annual Iranian Mathematics Conference, August 26-29, 2014.
- V. Faridani, M. Vafaei Jahan, M. Jalali, "**Combining Trust in Collaborative Filtering to Mitigate Data Sparsity and Cold-Start Problems**," The 4th International IEEE Conference on Computer and Knowledge Engineering (ICCKE), Mashhad, Iran, 2014.

M. Zabihi, M. Vafaei Jahan, J. Hamidzadeh, **"A Density Based Clustering Approach for Web Robot Detection,"** The 4th International IEEE Conference on Computer and Knowledge Engineering (ICCKE), Mashhad, Iran, 2014.

J.Rajabnia, M.Zabihi, M. Vafaei Jahan, **"Web Robot Detection with Fuzzy Inference System Based on Decision Trees,"** The Seventh Iran Data Mining Conference, IDMC 2013, Tehran, Iran.

A. Zarei, M.R-Akbarzadeh-T, M. Vafaei Jahan, **"The Extended Electromagnetic Algorithm for vehicel routing problem,"** The 11th Iranian Conference on Intelligent Systems, 2013.

S. Layeghi, A.H. Zarei, M. Vafaei Jahan, M. Jalali, **"Neuro-Fuzzy Method for Malicious Web Robot Detection,"** Computer Science and Engineering Conference, Islamic Azad University, Najaf Abad Branch, 2013.

S. Layeghi, A.H. Zarei, M. Vafaei Jahan, M. Jalali, **"The Analysis of the Data Mining Methods for Malicious Web Robot Detection,"** National Conference on Application of Intelligent Systems in Science and Technology, Islamic Azad University, Quchan Branch, 2013.

A.H. Zarei, S. Layeghi, M. Vafaei Jahan, M. Jalali, **"Bayesian Believe Network for Malicious Web Robot Detection,"** The 18th International Conference on Computer Association, Sharif University of Technology, Tehran, Iran, 2013.

B. Malekara, R. Dashti, M. Vafaei Jahan, **"A New method for Folksonomy Clustering based on Frequent Tags,"** Computer Science and Engineering Conference, Islamic Azad University, Najaf Abad Branch, 2013.

H. Khoshdel, M. Vafaei Jahan, M.H. Moattar **"A New method for Application Independent Document Keyword Extraction,"** Computer Science and Engineering Conference, Islamic Azad University, Najaf Abad Branch, 2013.

A. Gharib, A. Harati, M.R Akbarzadeh-T, M. Vafaei Jahan, **"Toward Application of Extremal Optimization Algorithm in Image Segmentation,"** The 2nd International IEEE Conference on Computer and Knowledge Engineering (ICCKE) 2012, Mashhad, Iran.

V. Amel Mahboob, P. Barekati, M. Vafaei Jahan, **"Web page recommendation model based on Markov chain and Bayesian rule,"** The sixth Iran Data Mining Conference (IDMC) 2012, Tehran, Iran.

B. Malekara, M. Vafaei jahan, M.H Moattar, m. Jalali, **"Discovery Of The Triadic Frequent Closed Patterns Based On Bipartite Graphs In Folksonomy,"** The sixth Iran Data Mining Conference (IDMC) 2012, Tehran, Iran.

J. Forozanfar, M. Vafaei Jahan, **"Channel Coding Based on Ising Spin Glass and Simulated Annealing,"** The 4th Iranian Conference on Electrical and Electronics Engineering (ICEEE) 2012, Gonabad, Iran.

M. Hossaini, M. Vafaei Jahan, J. Sadri, **"A New Evolutionary Algorithm Based on Water Cycle,"** The 4th Iranian Conference on Electrical and Electronics Engineering (ICEEE) 2012, Gonabad, Iran.

A. Gharib, M.R Akbarzadeh-T, A. Harati, M. Vafaei Jahan, **"Toward Application of Sandpile Model in Image Segmentation Based On Extremal Optimization Heuristic,"** The First Congress on Electrical, Computer and Information Technology Engineering (CECIT) 2012, Khayam University, Mashhad, Iran.

M. Gerivani, M. Vafaei Jahan, J. Mahdavi Chabook, **"Solving Max-Clique Problem By Exteremal Optimization,"** The First Congress on Electrical, Computer and Information Technology Engineering (CECIT) 2012, Khayam University, Mashhad, Iran.

M. Vafaei Jahan, F. Khosrojerdi, **"Context Encryption Based on Game of Life Gliders,"** The First Congress on Electrical, Computer and Information Technology Engineering, CECIT 2012, Khayam University, Mashhad, Iran, 2012.

M. Hossaini, H. Karimi, M. Vafaei Jahan, **"A New Structure for Block Ciphering Based on 3-D Cellular Automata,"** The First Congress on Electrical, Computer and Information Technology Engineering (CECIT) 2012, Khayam University, Mashhad, Iran.

H. Soltanpoor, M. Vafaei Jahan, M. Jalali, "**Graph-Based Image Segmentation Using Imperialist Competitive Algorithm**", The First Congress on Electrical, Computer and Information Technology Engineering (CECIT) 2012, Khayam University, Mashhad, Iran.

Z. Zahmatkesh; M. Vafaei Jahan and M. Yaghobi, "**Data Encryption Based on Multi State Cellular Automata Transforms**", 9th International ISC Conference on Information Security and Cryptology 2012 (ISCISC), Tabriz, Iran.

Z. Ghezelbiglo; M. Vafaei Jahan, "**Pseudo Random Number Generation Based on Chaos Logistic Map and Mid product Method**", 9th International ISC Conference on Information Security and Cryptology 2012 (ISCISC), Tabriz, Iran.

M. Bazghandi, G. Tadayon, M. Vafaei Jahan, "**Parsian Documents Summarization Based On Particle Swarm Optimization**", The First International Conference of Persian Language Processing, 2012 (ICPLP), Semnan, Iran.

M. Geraily; M. Vafaei Jahan, "**Fuzzy Detection of Malicious Attacks on Web Applications Based on Hidden Markov Model Ensemble**", Third International IEEE Conference on Intelligent Systems, Modelling and Simulation (ISMS), 2012.

S. Nozarian, M. Vafaei Jahan, "**A Novel Memetic Algorithm with Imperialist Competition as Local Search**", 2012 International Conference on Network and Computer Science (ICNCS), Hong Kong, 2012.

S. Nozarian, Y. Dehghan, M. Vafaei Jahan, "**Solving TSP on the Basis of Grid and Genetic Algorithm**", 2012 International Conference on System Engineering and Modeling (ICSEM 2012), Singapore, 2012.

S. Nozarian, H. Soltanpoor, M. Vafaei Jahan, "**A Binary Model on the Basis of Imperialist Competitive Algorithm in Order to Solve the Problem of Knapsack 1-0**", 2012 International Conference on System Engineering and Modeling (ICSEM 2012), Singapore, 2012.

H. Soltanpoor, M. Vafaei Jahan, "**Solving the Graph Bisection Problem with Imperialist Competitive Algorithm**", 2012 International Conference on System Engineering and Modeling (ICSEM 2012), Singapore, 2012.

N. Kamalfar, M. Niazi, M. Vafaei Jahan, "**The Framework to Detection Active Rules Based on BDD and SAT Verification**", The First Conference on Computer, Communication and Information Technology, CSCCIT 2011, Tabriz University, Tabriz, Iran.

H. Edalati Fard, M. Vafaei Jahan, M. Jalali "**The Effect of Sample Property on Optimum Search by Quantum Computing**", The 2011 International eConference on Computer and Knowledge Engineering (ICCKE2011), Ferdowsi University, Mashhad, Iran, October 2011.

M. Gharehjanloo, M. Vafaei Jahan, M.R. Akbarzadeh-T, M. Nosratabadi "**Extremal Optimization for Solving Job Shop Scheduling Problem**", The 2011 International eConference on Computer and Knowledge Engineering (ICCKE2011), Ferdowsi University, Mashhad, Iran, October 2011.

S.M. Hosseini, H. Karimi, M. Vafaei Jahan, "**From Complexity to Random Behaviors; Generate Random Numbers by Confusion in Cellular Automata State's**", The 2011 International Conference on Scientific Computing (CSC'11), Las Vegas, Nevada, USA, July, 2011.

S.M. Hosseini, H. Karimi, M. Vafaei Jahan, "**Avalanche in States; Combination of Sandpile and Cellular Automata for Generate Random Numbers**", The 2011 International Conference on Foundations of Computer Science (FCS'11), Las Vegas, Nevada, USA, July, 2011.

M. Vafaei Jahan, M.R. Akbarzadeh-T, "**Evolutionary Local Search Algorithm for Portfolio Selection: Spin Glass Based Approach**", The 2011 International Conference on Genetic and Evolutionary Methods (GEM'11), Las Vegas, Nevada, USA, July, 2011.

Najme Maleki, Mehrdad Jalali, M. Vafaei Jahan "**An Adaptive Data Hiding Method Using Neighborhood Pixels Differencing Based On Modulus Function**", The 2011 International Conference

on. Information Processing, Computer Vision, and Pattern Recognition (IPCV'11), Las Vegas, Nevada, USA, July, 2011.

S.M Sayyadi Kenari, M. Vafaei Jahan, M. Jalali, "**Uncertainty Multi-Skill Agents Coalition Formation Under Skill**," The 2011 IEEE-CSI International Symposium on Artificial Intelligence and Signal Processing, Sharif University of Technology, 2011.

M. Nosratabadi, M. Vafaei Jahan, M.R. Akbarzadeh-T. "**A Multi-Objective Fuzzy Job Shop Scheduling Using Extremal Optimization**," Fuzzy Systems, Sistan And Balochastan University, Zahedan, Iran, 2011.

M. Vafaei Jahan, M.R. Akbarzadeh-T., "**Spin Glass Phase Transition Analysis for Portfolio Selection**," The 3th Joint Congress on Fuzzy and Intelligent Systems, Yazd University, Yazd, Iran, 2009.

M. Vafaei Jahan, M.R. Akbarzadeh-T "**Extremal Optimization or Learning Automata? Higher Performance of Long Range Spin Glass Based Portfolio Selection**," The 2th Joint Congress on Fuzzy and Intelligent Systems, Malekashtar University, Tehran, Iran, 2008.

M. Vafaei Jahan, M.R. Akbarzadeh-T, "**Spin Glass Portfolio Selection Based on Learning Automata**," The 13th International Conference on Computer Association, Sharif University of Technology, Kish, Iran, 2007.

M. Vafaei Jahan, M.R. Akbarzadeh-T "**Spin Glass Optimization for Portfolio Selection**," The 1th Joint Congress on Fuzzy and Intelligent Systems, Ferdowsi University, Tehran, Iran, 2007.

M. Vafaei Jahan, M.R. Akbarzadeh-T, M.K. Shekofte, M. Baradaran, "**Cryptography Based Cellular Automata and Chaotic functions**," The 5th Iranian Society of Cryptography, MalekAshtar University, Tehran, Iran, 2008.

M. Vafaei Jahan, S. Setayeshi, M.R. Akbarzadeh-T, "**Thermal Sensitive Cryptography with Cellular Automata**," The 4th Iranian Society of Cryptography, Science and Research University, Tehran, Iran, 2007.

M. Vafaei Jahan, F. Shams, S. Setayeshi "**A Probabilistic Method of Architecture Decisions Evaluation of Value for Software Architecture Trade-off Analysis**," The 12th International Conference on Computer Association, Shahid Beheshti University, Tehran, Iran, 2006.

M.Vafaei Jahan, R. Shaibani, "**New Method for Software Size Estimation based on UML Metrics**," The First Conference on Software Engineering, Islamic Azad University, Rodhen Branch, 2005.

M.Vafaei Jahan, J. Habibi, "**CODSIM: The Description of component base distributed simulation architecture**," The 7th International Conference on Computer Association, Tehran, Iran, 2001

Presentation and Conference Speaker

1	Blockchain Technology and Smart Contracts, The Second National Conference Knowledge management (Dec. 2019)	Speaker, WorkShop
2	New Findings on Blockchain Technology, Municipality Foundation, (2019).	Speaker
3	Beyond the Secure Private Block Chain, Mashhad Provincial government, Iran, (2019)	Speaker
4	Big Data Analysis and Financial Markets, Islamic Azad University – Mashhad Branch, Business School Department, Iran, (2018).	Speaker
5	Vessel Trajectory Detection and Prediction. Simon Frazer University, Applied Science	Steering Committee
6	Fractal Dimention Analysis of Financial Time Series, IAUM, Engineering Department, Iran (2016).	Speaker
7	Financial Market Modeling and Markov Models, Ferdowsi University, Engineering	Speaker

Organizing International/National Conferences and Workshops

1	Chaos, Fractals and Complex Systems (CFCS2011), Mashhad Branch, Islamic Azad University (2011).	Executive Chair
2	The First International Congress on Technology, Communication and Knowledge (ICTCK2014), Mashhad Branch, Islamic Azad University (2014).	Scientific Chair– Principle Organizer
3	The Second International Congress on Technology, Communication and Knowledge (ICTCK2015), Mashhad Branch, Islamic Azad University (2015).	Steering Chair- Principal Organizer
4	The First Numerical Methods in CIVIL Engineering (NMCE2016), Mashhad Branch, Islamic Azad University (2016).	Steering Chair
5	The Third International Congress on Technology, Communication and Knowledge (ICTCK2016), Mashhad Branch, Islamic Azad University (2016).	Scientific Chair
6	Best Paper selection committee chair, ICTCK2014, IAUM, (2014, 2015)	Committee Chair

Software Tools Experiences

Analysis Tools	Matlab, Genie(Bayesian Network Tool), Bayes Server, Mathematica, RapidMiner
Full Stack Developer	Python, Javascript, Node Js
Crypto Currency Tools	Solidity, Hyperledger Fabric
Database Programming	Oracle, Microsoft SQL Server, Paradox, MySQL
Programming Language	Delphi, Delphi.NET, MQL 4,5 (Meta Trader), C++, JavaScript, Python, Node.JS, GPSS (General Purpose Simulation Language)
Mathematical and Simulation Tools	Matlab, Mathematica, GPSS, Mathematica, Simulink, RapidMiner
Modeling Language	UML
Analysis and Design Tools	Power Designer, Enterprise Architect, RUP
Back Office Tools	Power Point, Microsoft Office, Visio

References

Prof. Mohammad Reza Akbarzadeh Totonchi,

Full Professor Ferdowsi University

Email: Akbarzadeh@ieee.org

Prof. Mehrdad Jalali

Associate Professor, Islamic Azad University – Mashhad Branch

Email: dr_mehrdadjalali@yahoo.com

Prof. Uwe Glasser

Full Professor, Simon Frazer University

Email: glaesser@sfu.ca

Tel: +16044466012

