

CURRICULUM VITAE

Ali Movaghar

ADDRESS

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RESEARCH INTERESTS

- Performance Analysis
- Formal Methods
- Distributed real-time systems.
- Internet of Things
- Artificial Intelligence

EDUCATION

- *Ph.D.*
 - Computer, Information, and Control Engineering, The University of Michigan, Ann Arbor, MI, August 1985

Title of thesis:

Performability modeling with stochastic activity networks.
- *M.S.*
 - Computer, Information, and Control Engineering, The University of Michigan, Ann Arbor, MI, April 1979.
- *B.S.*
 - Electrical Engineering, Tehran University, Tehran, Iran, August 1977.

ACADEMIC EXPERIENCE

- Emeritus Professor, Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, June 2024 - present.
- Research Scholar, Computer Science and Engineering (CSE), Department of Electrical Engineering and Computer Science (EECS), The University of Michigan, Ann Arbor, MI, USA, January 2025 - August 31, 2025.
- Visiting Professor, Computer Science and Engineering (CSE), Department of Electrical Engineering and Computer Science (EECS), The University of Michigan, Ann Arbor, MI, USA, August 2023 - December 2024.
- Professor, Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, February 2007 - June 2024.
- Visiting Professor, Department of Electrical Engineering and Computer Science, University of California, Irvine, CA, USA, January 2011-August 2011.
- Associate Professor, Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, March 2000 - February 2007
- Assistant Professor, Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, February 1994 - March 2000
- Lecturer, Department of Electrical Engineering and Computer Science, The University of Michigan, Ann Arbor, MI, September 1987 - September 1988.

ADMINISTRATIVE EXPERIENCE

- Dean of International Affairs, Sharif University of Technology, Tehran, Iran, October 2015-November 2017.
- Chair, Information Technology Group at the Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, May 2015-November 2015.
- Chair, Software Group at the Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, October 2012 - October 2014.
- Chair, Information Technology Group at the Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2009-2011.
- Dean of Graduate Studies, School of Science and Engineering, International Campus of Sharif University of Technology at Kish Island, Persian Gulf, Iran, 2007-2008.
- Chair, Graduate Committee at the Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 1994-1996, 2002-2006.

- Chair, Software Group at the Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 1998-2000, 2003-2004.

COURSES TAUGHT

- *Graduate:*
 - Advanced Topics in Information Technology II: Software-Defined Networks (SDN)
 - Wireless Networking
 - Verification of Reactive Systems
 - Complexity Theory
 - Modeling and Analysis of Computer Networks
 - Computer Systems Performance Evaluation
 - Formal Methods for Reactive Systems
 - Advanced Topics on Software Systems
 - Advanced Computer Networks
 - Neural Networks
 - Fuzzy Systems
 - Theory of Finite Automata
- *Undergraduate:*
 - Foundations of Computer Science
 - Software Engineering
 - Discrete Structures
 - Computer Networks
 - Theory of Machines and Languages
 - Computer Simulation
 - Data Structures and Algorithms
 - Switching and Sequential Systems
 - Assembly Language Programming
 - Programming and Computer Systems.

HONORS

- Distinguished Researcher at Sharif University of Technology in 2010 and 2019
- Distinguished Professor of the Iranian Academy of Sciences in 2021

EDITORIAL ACTIVITIES

- Member of Editorial Board, Queueing Models and Service Management (QMSM)
- Member of Editorial Board, International Journal of Information Communication Technology (IJICT)
- Member of Editorial Board, Journal of AI and Data Mining (JADM)
- Member of Editorial Board, Journal of Algorithms and Computation (JAC)
- Member of Editorial Board, Iran Journal of Computer Science (IJCS)
- Editor-in-Chief, Journal of Computer and Robotics (JCR)
- Editor-in-Chief, Journal of Advances in Computer Research (JACR)
- Editor-in-Chief, Journal of Computer Science and Information Technology (JCSIT)

PROFESSIONAL ACTIVITIES

- Program Committee Member, International Conference on Fundamentals of Software Engineering (FSEN 25), Vsters, Sweden, April 2025.
- Program Committee Member, 9th IPM International Conference on Fundamentals of Software Engineering: Theory and Practice (FSEN 23), IPM, Tehran, Iran, May 2023.
- Program Committee Member, 27th Annual National CSI Computer Conference, Sharif University of Technology, Tehran, Iran, February 23 - February 24, 2022.
- Program Committee Member, 9th IPM International Conference on Fundamentals of Software Engineering: Theory and Practice (FSEN 21), IPM, Tehran, Iran, May 2021.
- The CSI Symposium on Real-Time and Embedded Systems and Technologies (RTEST 2020), IPM, Tehran, Iran, June 10-11, 2020.
- Program Committee Member, 8th IPM International Conference on Fundamentals of Software Engineering: Theory and Practice (FSEN 19), IPM, Tehran, Iran, May 2019.
- Program Committee Chair, 24th Annual National CSI Computer Conference, Sharif University of Technology, Tehran, Iran, February 13 - February 14, 2019.

- General Chair, The CSI Symposium on Real-Time and Embedded Systems and Technologies (RTEST), University of Tehran, Tehran, Iran, May 9-10, 2018.
- Program Committee Chair, 23rd Annual National CSI Computer Conference, Sharif University of Technology, Tehran, Iran, February 28 - March 1, 2018.
- General Chair, The CSI Symposium on Real-Time and Embedded Systems and Technologies (RTEST), Sharif University of Technology, Tehran, Iran, October 7-8, 2015.
- Program Committee Chair, Computer Area, The 23rd Iranian Conference on Electrical Engineering, Sharif University of Technology, May 10-14, 2015, Tehran, Iran.
- General Chair, The 2013th CSI International Symposium on Computer Science and Software Engineering (CSSE 2013), Sharif University of Technology, Tehran, Iran, December 25-27, 2013.
- General Chair, The 2013th CSI International Symposium on Artificial Intelligence and Signal Processing (AISP 2013), Sharif University of Technology, Tehran, Iran, December 25-27, 2013.
- General Chair, The 2013th CSI International Symposium on Computer Networks and Distributed Systems (CNDS 2013), Sharif University of Technology, Tehran, Iran, December 25-27, 2013.
- Program Committee Member, Third International Conference on Fundamentals of Software Engineering: Theory and Practice (FSEN '13), Tehran, Iran, April 2013.
- Program Committee Member, 3rd IPM-NUS Workshop on Computer Science, Tehran, Iran, March 2013.
- Program Committee Member, The 2012th CSI International Symposium on Computer Architecture & Digital Systems (CADS 2012), Shiraz, Iran, May 2-3, 2012.
- Program Committee Chair, 17th Annual CSI Computer Conference, Tehran, Iran, March 7-9, 2012.
- Program Committee Member, Third International Symposium on Fundamentals of Software Engineering: Theory and Practice (FSEN '11), Tehran, Iran, April 2011.
- Program Committee Member, Third International Symposium on Fundamentals of Software Engineering: Theory and Practice (FSEN '09), Kish Island, Persian Gulf, Iran, April 2009.

- International Program Committee Member, The 19th IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS 2007), Cambridge, Massachusetts, USA, November 19–21, 2007.
- General Chair, Second International Symposium on Fundamentals of Software Engineering: Theory and Practice (FSEN '07), Tehran, Iran, February 2007.
- Track Chair for Performance Evaluation, 12th International CSI Computer Conference, Tehran, Iran, January 2007.
- International Program Committee Member, The 18th IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS 2006), Dallas, TX, USA, November 2006.
- Track Chair for Software Engineering and Formal Methods, 11th International CSI Computer Conference, IPM School of Computer Science, Tehran, Iran, January 2006.
- General Chair, IPM International Workshop on Foundations of Software Engineering: Theory and Practice (FSEN 2005), Tehran, Iran, October 2005.
- International Program Committee Member, IASTED International Conference on Parallel and Distributed Computing and Systems, Phoenix, AZ, USA, November 2005.
- Program Committee Member, 10th Annual Int. CSI Computer Conference, Tehran, Iran, February 2005.
- International Program Committee Member, IASTED International Conference on Parallel and Distributed Computing and Systems, Cambridge, MA, USA, November 2004.
- Program Committee Chair, 9th Annual Int. CSI Computer Conference, Tehran, Iran, February 2004.
- Program Committee Member, 7th Annual Int. CSI Computer Conference, Tehran, Iran, March 2002.

PROFESSIONAL SOCIETIES

- Senior Member of the Institute of Electrical and Electronics Engineers (IEEE)
- Senior Member of the Association for Computing Machinery (ACM)
- Associate Member of the Iranian Academy of Sciences

NON-ACADEMIC EXPERIENCE

- Member of Technical Staff, AT&T Information Systems, Naperville, IL, 1985-1986
- Associate Researcher, Communications and Networks Laboratory (CNL), Industrial Technology Institute (ITI), Ann Arbor, MI, 1984-1985
- Associate Researcher, Institut National de Recherche en Informatique et en Automatique (INRIA), Paris, France, 1983-1984.

TECHNICAL REPORTS

- “Extending Rebeca with Synchronous Message and Reusable Components,” (with M. Sirjani, F.S. de Boer, and A. Shali), Report SEN-R0505, CWI, Amsterdam, Netherlands, February 2005.
- “Real-time local area networks: some design and modeling issues,” (with G. Le Lann, J. F. Meyer, and S. Sedillot), INRIA Research Report No. 448, Institut National de Recherche en Informatique et en Automatique, Paris, France, October 1985.
- “Performability modeling with stochastic activity networks,” Technical Report CRL-TR-8-85, The University of Michigan, Ann Arbor, MI, August 1985.
- “Stochastic activity networks: structure, behavior, and applications,” (with J. F. Meyer and W. H. Sanders), ITI Technical Report 84-7, Industrial Technology Institute, Ann Arbor, MI, December 1984.
- “Performability modeling with stochastic activity networks,” (with J. F. Meyer), ITI Technical Report 84-6, Industrial Technology Institute, Ann Arbor, MI, September 1984.

JOURNAL/ELECTRONIC NOTES PAPERS

1. Ehsan Azizi Khadem, Ali Movaghar, Aligning DevOps and Microservice Architecture: Empirical Mapping, Taxonomy, and RAG-Based Decision Support, *IEEE Access*, Vol. 13, pp. 189670 - 189685, 2025.
2. Ehsan Azizi Khadem, Ali Movaghar, From challenges to metrics: An LLM-driven DevOps recommendation system grounded in evidence-based mappings, *Array*, Vol. 28, 100547, 2025.
3. H. Zarini, N. Gholipoor, M. Robat Mili, M. Rasti, and A. Movaghar, Multiplexing B5G/6G Services over Aerial VLC Networks: A Comprehensive Radio Resource Management Framework, *IEEE Internet of Things Journal*, Vol. 12, No. 9, pp. 11600 - 11621, 2025.

4. I. Rahmati, H. Shah-Mansouri, and A. Movaghar, QECO: A QoE-Oriented Computation Offloading Algorithm based on Deep Reinforcement Learning for Mobile Edge Computing, *IEEE Transactions on Network Science and Engineering*, Vol. 12, No. 4, pp. 3118 - 3130, 2025.
5. Majid Alizadeh, Amirhoshang Hoseinpour Dehkordi, and Ali Movaghar, Meet Masks: Integrated distributed knowledge and verification for multi-agent systems, *Soft Computing*, Vol. 29, No. 8, pp. 4091 - 4106, 2025.
6. B. Ganji, A. Rezaee, S. Adabi, and A. Movaghar, Model verification of real-time and distributed stream processing architecture, *Computing*, Vol. 107, No. 17, 2025.
7. Z. Shamsa, A. Rezaee, S. Adabi, A. Movaghar Rahimabadi, and A.M. Rahmani, A distributed load balancing method for IoT/Fog/Cloud environments with volatile resource support, *Cluster Computing*, Vol. 27, No. 4, pp. 4281-4320, 2024.
8. M. Reza Kahani, N. Sarrafzadeh-Ghadimi, R. Entezari-Maleki, L. Sousa and A. Movaghar, Energy-aware QoS-based dynamic virtual machine consolidation approach based on RL and ANN, *Cluster Computing*, Vol. 27, No. 1, pp. 827-843, 2024.
9. M. Hosseini, S. Darabi, A.H. Jahangir and A. Movaghar, Yuz: Improving Performance of Cluster-Based Services by Near-L4 Session-Persistent Load Balancing, *IEEE Transactions on Network and Service Management*,. Vol. 21, No. 2, pp.1929-1942, 2024.
10. L. Rashidi, D. Towsley, A. Mohseni-Kabir and A. Movaghar, On the Performance Analysis of Epidemic Routing in Non-Sparse Delay Tolerant Networks, . *IEEE Transactions on Mobile Computing*, Vol. 22, No. 7, pp. 4134-4149, 2023.
11. B. T. Tabarsi, A. Rezaee, A. Movaghar, ROGI: Partial Computation Offloading and Resource Allocation in the Fog-Based IoT Network Towards Optimizing Latency and Power Consumption, *Cluster Computing*, Vol. 26, No. 3, pp.1767-1784, 2023.
12. F. Beikzadeh Abbasi, A. Rezaee, S. Adabi, A. Movaghar, Fault-tolerant scheduling of graph-based loads on fog/cloud environments with multi-level queues and LSTM-based workload prediction, *Comput. Networks*, Vol. 235, 109964, 2023.
13. S. Karimian-Aliabadi, M.M. Aseman-Manzar, R. Entezari-Maleki, D. Ardagna, B. Egger and A. Movaghar, Fixed-point Iteration Approach to Spark Scalable Performance Modeling and Evaluation, *IEEE Transactions on Cloud Computing*, Vol. 11, No. 1, pp. 897-910, 2023.

14. M.M. Aseman-Manzar, S. Karimian Aliabadi, R. Entezari-Maleki, B. Egger, A. Movaghar, Cost-Aware Resource Recommendation for DAG-Based Big Data Workflows: An Apache Spark Case Study, *IEEE Transactions on Service Computing*, Vol.16, No. 3, pp. 726-1737, 2023.
15. S. Aalibagi, H. Mahyar, A. Movaghar and H.E. Stanley, A Matrix Factorization Model for Hellinger-based Trust Management in Social Internet of Things, *IEEE Transactions on Dependable and Secure Computing*, Vol. 19, No. 4, 2274-2285, 2022.
16. M. Bagheri, M. Sirjani, E. Khamespanah, C. Baier and A. Movaghar, Magnifier: A Compositional Analysis Approach for Autonomous Traffic Control, to appear in the *IEEE Transactions on Software Engineering*, Vol. 48(, No. 8, pp. 2732-2747, 2022.
17. H. Mohtashami, A. Movaghar, M. Teshnehlal, Lifetime Improvement Based on Event Occurrence Patterns for Wireless Sensor Networks Using Multi-Objective Optimization, *Wireless Personal Communications*, Vol. 125, No. 4, pp. 3333-3349, 2022.
18. E. Ataie, R. Entezari-Maleki, S. E. Etesami, B. Egger, L. Sousa, A. Movaghar, Modeling and evaluation of dispatching policies in IaaS cloud data centers using SANs, *Sustain. Comput. Informatics Syst.*, Vol. 33, 100617, 2022.
19. R. Ghafouri and A. Movaghar, An adaptive and deadline-constrained workflow scheduling algorithm in infrastructure as a service cloud, *Iran J. Comput. Sci.*, Vol. 5, No. 1, 2022.
20. E. Heidari, A. Movaghar, H. Motameni and B. Barzegar: A novel approach for clustering and routing in WSN using genetic algorithm and equilibrium optimizer, *Int. J. Commun. Syst.*, Vol. 35, No.10, 2022.
21. A. Amini Motlagh, A. Movaghar, and A. M. Rahmani, A new reliability-based task scheduling algorithm in cloud computing, *Int. J. Commun. Syst.*, Vol. 35, No. 3, 2022.
22. R. Ghazali, S. Adabi, A. Rezaee, D.G. Down and A. Movaghar, CLQLMRS: improving cache locality in MapReduce job scheduling using Q-learning, *Journal of Cloud Computing*, Vol. 11, No. 45, 2022.
23. S.M. Safi, A. Movaghar and M. Ghorbani, Privacy protection scheme for the mobile social network, *J. King Saud Univ. Comput. Inf. Sci.*, Vol. 34, No. 7, pp. 4062-4074, 2022.
24. M. Ahmadi, M. Golkarifard, A. Movaghar and Hamed Yousefi, Processor Sharing Queues with Impatient Customers and State-dependent Rates,

- IEEE/ACM Transactions on Networking (TON)*, Vol. 29, No. 6, pp. 2467-2477, December 2021.
25. S.M. Safi, A. Movaghar and K. Safikhani Mahmoodzadeh, A framework for protecting privacy on mobile social networks, *Mobile Networks and Applications.*, Vol. 26, No. 3, pp. 1289-1299, 2021.
 26. M. Golkarifard, A. Movaghar, Dynamic VNF Placement, Resource Allocation, and Traffic Routing in 5G, *Computer Networks*, Vol. 188, pp. 107830, April 2021.
 27. M. Faraji Shoyari, E. Ataie, R. Entezari-Maleki, and A. Movaghar, Availability Modeling in Redundant OpenStack Private Clouds, *Software: Practice and Experience*, Vol. 51, No. 6, pp. 1218-1241, June 2021.
 28. L. Rashidi, A. Dalili-Yazdi, R. Entezari-Maleki, L. Sousa and A. Movaghar, Modeling Epidemic Routing: Capturing Frequently Visited Locations While Preserving Scalability, *IEEE Transactions on Vehicular Technology*, Vol. 70, No. 3, pp. 2713-2727, March 2021.
 29. P. Khanzadi, S. Adabi, B. Majidi and A. Movaghar, Optimal VM-to-user mapping in a cloud environment based on sustainable strategy space theory, *Cluster Computing*, Vol. 24, No. 4, pp. 3329-3347, 2021.
 30. R. Ghazali, S. Adabi, D.G. Down and A. Movaghar, A classification of Hadoop job schedulers based on performance optimization approaches, *Cluster Computing*, Vol. 24, No. 4, pp. 3381-3403, 2021.
 31. S.H. Ghafouri, S.M. Hashemi, M.R. Razzazi and A. Movaghar, Web service quality of service prediction via regional reputation-based matrix factorization, *Concurrency and Computation: Practice and Experience*, Vol. 33, No. 17, September 2021.
 32. P. Khanzadi, B. Majidi, S. Adabi, J.C. Patra and A. Movaghar, Robust fuzzy rough set based dimensionality reduction for big multimedia data hashing and unsupervised generative learning, *Multimedia Tools and Applications*, Vol. 80, No. 12, pp. 17745-17772, 2021.
 33. Rezaei, M. Gharib, R. Entezari-Maleki, K. Trivedi and A. Movaghar, Modeling and Evaluation of Multi-hop Wireless Networks using SRNs, *IEEE Transactions on Network Science and Engineering*, Vol. 8, No. 1, pp. 662-679, 2021.
 34. M. Askarnejad, M. Malekimajd and A. Movaghar, Network and Application-Aware Cloud Service Selection in Peer-Assisted Environments, *IEEE Transactions on Cloud Computing*, Vol. 9, No. 1, pp. 258-271, 2021.

35. M. Malekimajd and A. Movaghar, Minimizing data access latencies for virtual machine assignment in cloud systems, *IEEE Transactions on Service Computing*, Vol.13, No.5, October 2020.
36. A. Amini Motlagh, A. Movaghar and A.M. Rahmani, Task Scheduling Mechanisms in Cloud Computing: A Systematic Review, *International Journal of Communication Systems*, Vol. 33, No. 6, April 2020.
37. R. Entezari-Maleki, S.E. Etesami, N. Ghorbani, A.A. Niaki, L. Sousa, and A. Movaghar, Modeling and Evaluation of Service Composition in Commercial Multi-Clouds using Timed Colored Petri Nets, *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, Vol. 53, No. 3, pp. 947-961, 2020.
38. M. Ahmadi, J. Roberts, E. Leonardi, and A. Movaghar, Cache Subsidies for an Optimal Memory for Bandwidth Tradeoff in the Access Network, *IEEE Journal on Selected Areas in Communications*, Vol. 38, No. 4, pp. 736-740, 2020.
39. M. Ahmadi, J. Roberts, E. Leonardi, and A. Movaghar, On the effectiveness of the PIT in reducing upstream demand in an NDN router, *Performance Evaluation*, Vol. 138, Article 102081, April 2020.
40. A. Ghandomi, A. Movaghar, M. Reshadi, and A. Khademzadeh, Designing a MapReduce Performance Model in Distributed Heterogeneous Platforms Based on Benchmarking Approach, *The Journal of Supercomputing*, Vol. 76, No. 9, pp. 7177-7203, January 2020.
41. M. Ahmadnia, A. Movaghar, and A.M. Rahmani, Ontology-Based Modelling and Information Extracting of Physical Entities in Semantic Sensor Networks, *IETE Journal of Research*, Vol. 65, No. 4, 2019.
42. M. Gharib, H. Yousefzadeh and A. Movaghar, A Secure Overlay Routing for Large Scale Networks, *IEEE Transactions on Network Science and Engineering*, Vol. 6, No. 3, pp. 501-511, 2019.
43. E. Ataie, R. Entezari-Maleki, L. Rashidi, K. S. Trivedi, D. Ardagna, and A. Movaghar, Hierarchical Stochastic Models for Performance, Availability, and Power Consumption Analysis of IaaS Clouds, *IEEE Transactions on Cloud Computing*, Vol.7, No.4, pp. 1039-1056, 2019.
44. L. Rashidi, R. Entezari-Maleki, D. Chatzopoulos, P. Hui, K.S. Trivedi, and A. Movaghar, Performance Evaluation of Epidemic Content Retrieval in DTNs with Restricted Mobility, *IEEE Transactions on Network and Service Management*, Vol. 16, No. 2, pp. 701-714, 2019.

45. S. Karimian Aliabadi, D. Ardagna, R. Entezari-Maleki, E. Gianniti, and A. Movaghar, Analytical composite performance models for Big Data applications. *J. Network and Computer Applications*, Vol. 142, pp. 63-75, 2019.
46. B. Barzegar, H. Motameni, A. Movaghar, EATSDCD: A green energy-aware scheduling algorithm for parallel task-based application using clustering, duplication and DVFS technique in cloud data centers. *Journal of Intelligent and Fuzzy Systems*, Vol. 36, No. 6, pp. 5135-5152, 2019.
47. A. Ghandomi, M. Reshadi, A. Movaghar and A. Khademzadeh, Hyb-SMRP: A Hybrid Scheduling Algorithm in Hadoop MapReduce Framework, *Journal of Big Data*, Vol. 6, No. 106, Nov. 2019.
48. M. Golkarifard, J. Yang, Z. Huang, A. Movaghar and P. Hui, Dandelion: A Unified Code Offloading System for Wearable Computing, *IEEE Transactions on Mobile Computing*, Vol. 18, No. 3, pp. 546-559, March 2019.
49. R. Ghafouri, A. Movaghar, and M. Mohsenzadeh, A budget constrained scheduling algorithm for executing workflow application in infrastructure as a service cloud, *Peer-to-Peer Networking and Applications*, Vol. 12, No. 1, pp. 241-248, January 2019.
50. M. Nikravan, A. Movaghar and M. Hosseinzadeh, A Lightweight Sign-encryption Scheme for Defense Against Fragment Duplication Attack in the 6LoWPAN Networks, *Peer-to-Peer Networking and Applications*, Vol. 12, No. 1, pp. 209 - 226, January 2019.
51. S. Bagholizadeh, A. Movaghar and N. Majidi, A Uniformization-Based Algorithm for Continuous-Time Stochastic Games Model Checking, *Theoretical Computer Science*, Vol. 756, pp. 1-18, January 2019.
52. M. Ebrahimi, G. Sotudeh and A. Movaghar, Symbolic Checking of Fuzzy CTL on Fuzzy Program Graph, *Acta Informatica*, Vol. 56, No. 1, pp. 1-33, 2019.
53. M. Habibi, M. Fazli and A. Movaghar, Efficient distribution of requests in federated cloud computing environments utilizing statistical multiplexing, *Future Generation Comp. Syst.*, Vol. 90, pp. 451-460, 2019.
54. S. Fakhrolmobasheri, E. Ataie and A. Movaghar, Modeling, and Evaluation of Power-Aware Software Rejuvenation in Cloud Systems, *Algorithms*, Vol. 11, No.10, 2018
55. M. Bagheri, M. Sirjani, E. Khamespanah, N. Khakpour, I. Akkaya, A. Movaghar and E.A. Lee, Coordinated Actor Model for Self-adaptive Track-based Traffic Control Systems, *Journal of Systems and Software*, Vol. 143, pp. 116-139, Sept. 2018.

56. R. Ghafouri, A. Movaghar and M. Mohsenzadeh, Time-cost efficient scheduling algorithms for executing workflow in infrastructure as a service cloud, *Wireless Personal Communications*, Vol. 103, No. 3, pp. 2035-2070, 2018.
57. R. Entezari-Maleki, K. S. Trivedi, L. Sousa, and A. Movaghar, Performability-based Workflow Scheduling in Grids, *The Computer Journal*, Vol. 61, No. 10, pp. 1479-1495, Oct. 2018.
58. S. Rezaei, M. Gharib and A. Movaghar, Throughput Analysis of IEEE 802.11 Multi-hop Wireless Networks with Routing Consideration: A General Framework, *IEEE Transactions on Communications*, Vol. 66, No. 11, June 2018.
59. R. Entezari-Maleki, M. Gharib, M. Khosravi and A. Movaghar, IDS Modeling and Security Evaluation in WANETs using Stochastic Models, *International Journal of Ad Hoc and Ubiquitous Computing*, Vol. 27, No. 3, pp. 171-186, 2018.
60. A. Dehlaghi-Ghadim, R. Entezari-Maleki, and A. Movaghar, Cost-Efficient Scheduling for Deadline Constrained Grid Workflows, *Computing and Informatics*, Vol. 37, No. 4, pp. 838-864, 2018.
61. E. Ataie, R. Entezari-Maleki, S.E. Etesami, B. Egger, D. Ardagna, and A. Movaghar, Power-aware Performance Analysis of Self-Adaptive Resource Management in IaaS Clouds, *Future Generation Computer Systems (FGCS)*, Vol. 86, pp. 134-144, March 2018.
62. H. Mahyar, R. Hasheminezhad, E. Ghalebi, A. Nazemian, R. Grasu, A. Movaghar, and H.R. Rabiee, Compressive Sensing of High Betweenness Centrality Nodes in Networks, *Physica A: Statistical Mechanics and its Applications*, Vol. 497, No. 8, pp. 166 - 184, May 2018.
63. H. Mahyar, R. Hasheminezhad, E. Ghalebi, A. Nazemian, R. Grasu, A. Movaghar, and H.R. Rabiee, Identifying Central Nodes for Information Flow in Social Networks using Compressive Sensing, *Soc. Netw. Anal. Min.*, Vol. 33, No. 8, pp. 1- 24, March 2018.
64. M. Nikravan, A. Movaghar and M. Hosseinzadeh, A Lightweight Defense Approach to Mitigate Version Number and Rank Attacks in Low-Power and Lossy Networks, *Wireless Personal Communications*, Vol. 99, No. 2, pp. 1035 - 1059, March 2018.
65. R. Entezari-Maleki, M. Bagheri, S. Mehri, and A. Movaghar, Performance Aware Scheduling Considering Resource Availability in Grid Computing, *Engineering with Computers.*, Vol. 33, No. 2, pp. 191-206, April 2017.

66. 10. M. Bagheri, E. Khamespanah, N. Khakpour, M. Sirjani, A. Movaghar, and E.A. Lee, Runtime compositional analysis of track-based traffic control systems, *SIGBED Review*, Vol. 14, No. 3, pp. 38-39, 2017.
67. S.M. Taheri, H Mahyar, M. Firouzi, E. Ghalebi, R. Grosu and A. Movaghar, Hellrank: a Hellinger-based centrality measure for bipartite social networks, *Soc. Netw. Anal. Min.*, Vol. 22, No. 7, pp. 1- 16, May 2017.
68. R. Entezari-Maleki, L. Sousa, and A. Movaghar, Performance and Power Modeling and Evaluation of Virtualized Servers in IaaS Clouds, *Information Sciences*, Vol. 394-395, pp.106-122, July 2017.
69. Z. Shariat, A. Movaghar and M. Hoseinzadeh, A learning automata and clustering-based routing protocol for named data networking, *Telecommunication Systems*, Vol. 65, Issue 1, pp.9-29, May 2017.
70. R. Entezari-Maleki, L. Sousa, and A. Movaghar, Performance and Power Modeling and Evaluation of Virtualized Servers in IaaS Clouds, *Information Sciences*, Vol. 394-395, pp.106-122, July 2017.
71. Z. Shariat, A. Movaghar and M. Hoseinzadeh, A learning automata and clustering-based routing protocol for named data networking, to appear in the *Telecommunication Systems*, Vol. 65, Issue 1, pp.9-29, May 2017.
72. M. Gharib, Z. Moradlou; M.A. Doostari, and A. Movaghar, Fully Distributed ECC-based Key Management for Mobile Ad Hoc Networks, *Computer Networks*, vol. 113, No.11 , pp. 269-283, Feb 2017.
73. M. Gharib, H. Yousefzadeh and A. Movaghar, A Survey of Key Pre- Distribution and Overlay Routing in Unstructured Wireless Networks, *Scientia Iranica*, Vol. 23, No. 6, pp. 2831-2844, Oct. 2016.
74. M. Hatamian, H. Barati, A. Movaghar, N. Naghizadeh, CGC: centralized genetic-based clustering protocol for wireless sensor networks using onion approach, *Telecommunication Systems*.Telecommunication Systems, Vol. 62, No. 3, pp. 611-623, 2016.
75. M. Gharib, H. Yousefzadeh and A. Movaghar, A Survey of Key Pre-Distribution and Overlay Routing in Unstructured Wireless Networks, *Scientia Iranica*, Vol. 23, No. 6, pp. 2831-2844, Oct. 2016.
76. A. Barati, A. Movaghar, M. Sabaii, RDTP: reliable data transport protocol in wireless sensor networks, *Telecommunication Systems*, Vol. 62, No. 3, pp. 611 - 623, 2016.
77. M. Gharib, H. Yousefzadeh, A. Movaghar, Secure Overlay Routing Using Key Pre-Distribution: A Linear Distance Optimization Approach, *IEEE Transactions on Mobile Computing*, Vol. 15, No. 9, pp. 2333 - 2344, Sept. 2016.

78. A. Barati, A. Movaghar and M. Sabaii, RDTP: reliable data transport protocol in wireless sensor networks, *Telecommunication Systems*, Vol. 62, No. 3, pp. 611-623, 2016.
79. H. Yousefi, M. Malekimajd, M. Ashuri, A. Movaghar, Fast Aggregation Scheduling in Wireless Sensor Networks, *IEEE Transactions on Wireless Communications*, Vol. 14, No. 6, pp. 3402 - 3414, 2015.
80. M.E. Esmaili, R. Entezari-Maleki, A. Movaghar, Improved Region-Based TCTL Model Checking of Time Petri Nets, *JCSE*, Vol. 9, No. 1, pp. 9-19, 2015.
81. M. Ashouri, H. Yousefi, J. Basiri, A.M.A. Hemmatyar, A. Movaghar, PDC: Prediction-based data-aware clustering in wireless sensor networks, *J. Parallel Distrib. Comput.*, Vol. 81-82, pp. 24-35, 2015.
82. M. Malekimajd, A. Movaghar, and S. Hosseini Motlagh Minimizing latency in geo-distributed clouds, *The Journal of Supercomputing*, Vol. 71, No. 12, pp. 4423-4445, 2015.
83. H. Barati, A. Movaghar and A. M. Rahmani, EACHP: Energy Aware Clustering Hierarchy Protocol for Large-Scale Wireless Sensor Networks, *Wireless Personal Communications*, Vol. 85, No. 3, pp. 765-789, 2015.
84. R. Entezari-Maleki, K.S. Trivedi and A. Movaghar, Performability Evaluation of Grid Environments using Stochastic Reward Nets, *IEEE Transactions on Dependable and Secure Computing (TDSC)*, Vol. 12, No. 2, pp. 204-216, 2015.
85. S. Aliakbary, J. Habibi and A. Movaghar, Feature Extraction from Degree Distribution for Comparison and Analysis of Complex Networks, *The Computer Journal*, Oxford University Press, Vol. 58, Issue 9, pp. 2079-2091, 2015.
86. S. Aliakbary, S. Motallebi, S. Rashidian, J. Habibi, and A. Movaghar, Towards a Size-Independent Distance Metric for Topological Comparison of Complex Networks, *Chaos: An Interdisciplinary Journal of Nonlinear Science*, Vol. 25, No. 2, 2015, <http://dx.doi.org/10.1063/1.4908605>.
87. S. Aliakbary, S. Motallebi, S. Rashidian, J. Habibi, and A. Movaghar, Noise-Tolerant Model Selection and Parameter Estimation for Complex Networks, *Physica A: Statistical Mechanics and its Applications*, Vol. 427, pp.100-112, June 2015.
88. G. Sotudeh and A. Movaghar, Abstraction and approximation in fuzzy temporal logics and models, *Formal Aspects of Computing (FAC)*, Vol. 27, Issue 2, pp. 309-334, Nov. 2014.

89. R. Entezari-Maleki, A. Mohammad khan, H.Y. Yeom and A. Movaghar, Combined Performance and Availability Analysis of Distributed Resources in Grid Computing, *The Journal of Supercomputing*, Vol. 69, No. 2, pp. 827-844, 2014.
90. S. Kardani-Moghaddam, R. Entezari-Maleki and A. Movaghar, A Cost Efficient Two-level Market Model for Task Scheduling Problem in Grid Environment, *Iranian Journal of Science & Technology, Transactions of Electrical Engineering*, Vol. 38, No. 1, pp. 73-90, 2014.
91. M. Mohaqeqi, M. Kargahi, A. Movaghar, Analytical Leakage-Aware Thermal Modeling of a Real-Time System, *IEEE Transactions on Computers (TC)*, Vol. 63, No. 6, pp. 1377-1391, June 2014.
92. A. Barati, A. Movaghar, M. Sabaei, Energy Efficient and High Speed Error Control Scheme for Real-Time Wireless Sensor Networks, *International Journal of Distributed Sensor Networks*, Vol. 2014, Article ID 698125, 9 pages, 2014. doi:10.1155/2014/698125.
93. S. Adabi, A. Movaghar, A.M. Rahman, H. Beigy and H. Dastmalchy-Tabrizi, A new fuzzy negotiation protocol for grid resource allocation, *Elsevier Journal of Network and Computer Applications*, Vol. 37, No. 1, pp. 89-126, January 2014.
94. S. Adabi, A. Movaghar and A.M. Rahmani, Bi-level fuzzy based advanced reservation of cloud workflow applications on distributed grid resources, *The Journal of Supercomputing*, Vol. 67, No. 1, pp. 175-218, January 2014.
95. F. Ghods, H. Yousefi and A. Movaghar, MC-MLAS: Multi-Channel Minimum Latency Aggregation Scheduling in Wireless Sensor Networks, *Elsevier - Computer Networks* Vol. 57, Issue 18, pp. 3812-3825, December 2013.
96. H. Motallebi, M. Abdollahi Azgomi, M. S. Mirzaei and A. Movaghar, A New Extension of Activity Networks for Modelling and Verification of Timed Systems, to appear in *Turkish Journal of Electrical Engineering & Computer Sciences (TJEECS)*, Vol. 21, pp. 1751-1779, 2013.
97. S. Adabi, A. Movaghar, A.M. Rahmani and H. Beigy, Negotiation strategies considering market, time and behavior functions for resource allocation in computational grid, *The Journal of Supercomputing*, Vol. 66, No. 3, pp. 1350-1389, December 2013.
98. S. Adabi, A. Movaghar, A.M. Rahmani and H. Beigy, Market-based Grid Resource Allocation using New Negotiation Model, *Elsevier Journal of Network and Computer Applications*, Vol. 36, No. 1, pp. 543-565, January 2013.

99. A. Balador, A. Movaghar, S. Jabbehdari, D. Kanellopoulos, A Novel Contention Window Control Scheme for IEEE 802.11 WLANs, *IETE Technical Review*, Vol. 29, Issue 3, pp. 202-212, May-June 2012.
100. H. Yousefi, M.H. Yeganeh, N. Alinaghipour, A. Movaghar, Structure-free Real-time Data Aggregation in Wireless Sensor Networks, *Elsevier Journal of Computer Communications (COMCOM12)*, Vol. 35, No. 9, pp. 1132-1140, 2012.
101. N. Tabbaa, R. Entezari-Maleki, and A. Movaghar, Reduced Communications Fault Tolerant Task Scheduling Algorithm for Multiprocessor Systems, *Procedia Engineering*, Vol. 29, pp. 3820-3825, 2012.
102. S. Kardani-Moghaddam, F. Khodadadi, R. Entezari-Maleki, and A. Movaghar, A Hybrid Genetic Algorithm and Variable Neighborhood Search for Task Scheduling Problem in Grid Environment, *Procedia Engineering*, Vol. 29, pp. 3808-3814, 2012.
103. R. Entezari-Maleki and A. Movaghar, A Probabilistic Task Scheduling Method for Grid Environments, *Future Generation Computer Systems (FGCS)*, Vol. 28, pp. 513-524, 2012.
104. M. Malekimaajid, M.R. Hoseiny-Farahabady, A. Movaghar and H. Sarbazi-Azad, Pancyclicity of OTIS (Swapped) Networks based on properties of the factor graph, *Information Processing Letters*, Vol. 111, No. 23-24, pp. 1114-1119, December 2011.
105. M. Kargahi and A. Movaghar, Performance Optimization Based on Analytical Modeling in a Real-Time System with Constrained Time/Utility Functions, *IEEE Transactions on Computers (TC)*, Vol. 60, No. 8, pp. 1169-1181, August 2011.
106. F. Ghassemi, W.J. Fokkink and A. Movaghar, Verification of Mobile Ad Hoc Networks: An Algebraic Approach, *Theoretical Computer Science*, Vol. 412, No. 28, pp. 3262-3282, June 2011.
107. F. Reza Entezari-Maleki and A. Movaghar, A Genetic-Based Scheduling Algorithm to Minimize the Makespan of the Grid Applications, *International Journal of Grid and Distributed Computing (IJGDC)*, Vol. 4, No. 2, pp 11-24, June 2011.
108. A. Movaghar, Analysis of a Dynamic Assignment of Impatient Customers to Parallel Queues, *Queueing Systems*, Vol. 67, No. 3, pp. 251-273, 2011.
109. E. Heidari and A. Movaghar, An Efficient Method Based on Genetic Algorithms to Solve Sensor Network Optimization Problem, *International Journal on Applications of Graph Theory in Wireless Ad hoc Networks*

- and *Sensor Networks (GRAPH-HOC)*, Vol. 3, No. 1, pp. 18-33, March 2011.
110. T. Shafiei, M.R. Hoseiny-Farahabady, A. Movaghar, and H. Sarbazi-Azad, On pancyclicity properties of OTIS-mesh, *Information Processing Letters*, Vol. 111, No. 8, pp. 353-359, March 2011.
 111. F. Ghassemi, W. Fokkink and A. Movaghar, Equational Reasoning on Mobile Ad Hoc Networks, *Fundamenta Informaticae*, Vol. 105, No. 4, 2010.
 112. A. Balador, A. Movaghar, S. Jabbehdari, Efficient Contention Window Control with Two-Element Array, *Journal of Computing (JoS)*, Vol. 2, No. 8, pp. 13-18, 2010.
 113. 26. A. Balador, M. Ghasemivand, A. Movaghar, S. Jabbehdari, An Adaptive Contention Window Control for Improving DCF Throughput and Fairness, *European Journal of Scientific Research (EJSR)*, Vol. 45, No. 2, pp. 310-323, 2010.
 114. 27. A. Balador, A. Movaghar, S. Jabbehdari, History Based Contention Window Control (HBCWC) in IEEE 802.11 Mac Protocol in Error Prone Channel, *Journal of Computer Science*, Vol. 6, No. 2, pp. 205-209, 2010.
 115. M. Kargahi and A. Movaghar, Utility Accrual Dynamic Routing in Real-Time Parallel Systems, *IEEE Transactions on Parallel and Distributed Systems (IEEE TDPS)*, Vol. 36, No. 5, pp. 835-849, September 2010.
 116. M. Kargahi and A. Movaghar, Dynamic Routing of Real-time Jobs among Parallel EDF Queues: A Performance Study, *Computers and Electrical Engineering*, Vol. 36, No. 5, pp. 835-849, September 2010.
 117. H. R. Shahriari, M. Sadegh Makarem, M. Sirjani, R. Jalili and A. Movaghar, Vulnerability Analysis of Networks to Detect Multiphase Attacks Using the Actor-based Language Rebeca, *Computers and Electrical Engineering*, Vol. 36, No. 5, pp. 874-885, September 2010.
 118. M.M.Jaghooori, M. Sirjani, M.R. Mousavi, E. Khamespanah and A. Movaghar, Symmetry and Partial Order Reduction Techniques in Model Checking Rebeca, *ACTA INFORMATICA*, Vol. 47, No.1, pp.33-66, 2010.
 119. M. Izadi and A. Movaghar, Compositional Failure-based Equivalence of Constraint Automata, *Electronic Notes in Theoretical Computer Science (ENTCS)*, No. 250, pp. 105-122, 2009.
 120. M. Izadi and A. Movaghar, Model Checking of Component-Based Software Using Compositional Reductions, *International Journal of Software Engineering and Knowledge Engineering (IJSEKE)*, Vol. 18, No. 5, pp. 683-712, 2008.

121. M. K. Rafsanjani, A. Movaghar, Identifying Monitoring Nodes with Selection of Authorized Nodes in Mobile Ad Hoc Networks, *World Applied Sciences Journal*, Vol. 4, No. 3, pp. 444-449, 2008.
122. 34. M. K. Rafsanjani, A. Movaghar and F. Koroupi Investigating Intrusion Detection Systems in MANET and Comparing IDSs for Detecting Misbehaving Nodes, World Academy of Science, *Engineering and Technology*, Vol. 44, pp. 351-355, 2008.
123. M. Niazi Torshiz and A. Movaghar, Performance Evaluation of a Fuzzy-Based Traffic Conditioner for Mobile Ad Hoc Networks, *Journal of Circuits, Systems, and Computers (JCSC)*, Vol. 17, No. 6, pp. 995-1014, December 2008.
124. S.J. Mirabedini, M. Teshnehlal, M.H. Shenasa, A. Movaghar and A.M. Rahmani, AFAR: Adaptive Fuzzy Ant-based Routing for Communication Networks, *Journal of Zhejiang University Science A*, Vol. 12, No. 9, pp. 1666-1675, 2008.
125. M. Kargahi and A. Movaghar, Stochastic DVS-Based Dynamic Power Management for Soft Real-Time Systems, *Microprocessors and Microsystems*, Vol. 32, No. 3, pp. 121-144, 2008.
126. M. Kargahi and A. Movaghar, A Two Class M/M/1 System with Preemptive Non-Real-Time Jobs and Prioritized Real-Time Jobs under Earliest-Deadline-First Policy, *Scientia Iranica*, Vol. 15, No. 2, pp. 252-265, March-April 2008.
127. M. Asadpour, B. Sattarzadeh and A. Movaghar, Anonymous Authentication Protocol for GSM Networks, *International Journal of Security and Networks*, Vol. 3, No. 1, pp. 54-62, 2008.
128. M. Kargahi and A. Movaghar, A Non-Preemptive Two-Class M/M/1 System with Prioritized Real-Time Jobs under Earliest-Deadline-First Policy, *Journal of Industrial and Systems Engineering*, Vol. 1, No. 1, pp. 260-280, Fall 2007.
129. M. Kargahi and A. Movaghar, A Multiprocessor System with Non-Preemptive Earliest-Deadline-First Scheduling Policy: A Performability Study, *Journal of Industrial and Systems Engineering*, Vol. 1, No. 3, pp. 37-55, Spring 2007.
130. H. Motameni, A. Movaghar and F. Fadavi Amiri, Mapping Activity Diagram to Petri Net: Application of Markov Theory for Analyzing Non-Functional Parameters, *International Journal of Engineering*, Vol. 20, No. 1, pp. 65-76, April 2007.

131. M. Abdollahi Azgomi and A. Movaghar, An Introduction to High-Level Stochastic Activity Networks, *International Reviews on Computers and Software*, Vol. 1, No. 1, Praise Worthy Prize, ISSN: 1828-6003, pp. 20-30, 2006.
132. M. Kargahi and A. Movaghar, A Method for Performance Analysis of Earliest-Deadline-First Scheduling Policy, *The Journal of Supercomputing*, Vol. 37, No. 2, pp. 197-222, 2006.
133. A. Movaghar, On queueing with customer impatience until the end of service, *Stochastic Models*, Vol. 22, pp. 149-173, 2006.
134. A. Kamandi, M. Abdollahi Azgomi and A. Movaghar, Transformation of UML Models into Analyzable OSAN Models, *Electronic Notes in Theoretical Computer Science (ENTCS)*, No. 159, pp. 3-22, 2006.
135. M. Izadi and A. Movaghar, An Equivalence Based Method for Compositional Verification of the Linear Temporal Logic of Constraint Automata, *Electronic Notes in Theoretical Computer Science (ENTCS)*, No. 159, pp. 171-186, 2006.
136. M. Izadi and A. Movaghar, An Efficient Model Checking Algorithm for a Fragment of Mu-Calculus, *CSI Journal on Computer Science & Engineering (JCSE)*, Vol. 3, No. 3 (a), pp. 43-53, Fall 2005 (in Persian).
137. M. Sirjani, F. S. de Boer and A. Movaghar, Modular Verification of a Component-Based Actor Language, *Journal of Universal Computer Science (JUCS)*, Vol. 11, No. 10, pp. 1695-1717, 2005.
138. M. Sirjani, A. Movaghar, A. Shali and F. S. de Boer, Model Checking, Automated Abstraction, and Compositional Verification of Rebeca, *Journal of Universal Computer Science (JUCS)*, Vol. 11, No. 6, pp. 1054-108, 2005.
139. M. Abdollahi Azgomi and A. Movaghar, A Modelling Tool for Hierarchical Stochastic Activity Networks, *Simulation Modeling Practice and Theory (SimPAT)*, Vol. 13, No. 6, pp. 505-524, 2005.
140. M. Sirjani and A. Movaghar, Integrating Model Checking and Deduction for an Actor-Based Language, *Scientia Iranica*, Vol. 12, No. 1, pp. 55-65, Winter 2005.
141. M. Abdollahi Azgomi and A. Movaghar, A Modeling Tool for A New Definition of Stochastic Activity Networks, *Iranian Journal of Science and Technology*, Vol. 29, No. B1, 2005.
142. A. Movaghar, Optimal Control of Parallel Queues with Impatient Customers, *Performance Evaluation*, Vol. 60, 1-4, pp.327-343, 2005.

143. M. Abdollahi Azgomi and A. Movaghar, Hierarchical Stochastic Activity Networks: Formal Definitions and Behaviour, *International Journal of Simulation, Systems, Science, and Technology*, Vol. 6, No. 1-2, pp. 56-66, January 2005.
144. M. Sirjani, A. Movaghar, A. Shali and F. de Boer, Modeling and Verification of Reactive Systems using Rebeca, *Fundamenta Informaticae*, Vol. 63, No. 4, pp. 385-410, December 2004.
145. M. Sirjani, S.H. Razi, A. Movaghar, M.M. Jaghoori, S. Forghanizadeh, and M. Mojdeh, Model Checking CSMA/CD Protocol Using an Actor-Based Language, *WSEAS Transactions on Circuit and Systems*, Vol. 4, No. 6, 2004.
146. S.M.R. Mirsarraf, A. Movaghar, and M.Hakkak, Optimization of LZ78 Compression Algorithm in Tracking Location of Mobile Communication Users, *Iranian Journal of Electrical and Computer Engineering*, Vol. 2, No. 1, pp. 3-14, Spring-Summer 2004 (in Persian).
147. M. Abdollahi Azgomi and A. Movaghar, Design and Implementation of SharifSAN and Its Features for Performance Evaluation of Computer Systems, *Sharif Journal of Science & Technology*, No. 25, pp. 29-41, 2003 (in Persian).
148. A. Movaghar, Stochastic Activity Networks: A New Definition and Some Properties, *Scientia Iranica*, Vol. 8, No. 4, pp. 303-311, October 2001.
149. A. Movaghar, On queueing with customer impatience until the beginning of service, *Queueing Systems*, Vol. 29, No. 4, pp. 337-350, 1998.
150. A. Movaghar, Optimal assignment of impatient customers to parallel queues with blocking, *Scientia Iranica*, Vol. 3, No. 29, pp. 137-146, January 1997.

CONFERENCE AND WORKSHOP PAPERS

1. H. Zarini, M.R. Maleki, N. Gholipoor, M. Roban Mili, M. Rasti, A. Movaghar, D.W.K. Ng and E. Hossein, Multiplexing eMBB and mMTC Services over Aerial Visible Light Communications, *Proceedings of the ICC 2023 IEEE International Conference on Communications (ICC): SAC Aerial Communications Track*, Rome, Italy, pp. 2655 - 2661, January 2023.
2. S.M. Taheri, H. Mahyar, M. Firouzi, E. Ghalebi, R. Grosu and A. Movaghar, Extracting Implicit Social Relation for Social Recommendation Techniques in User Rating Prediction, *Proceedings of the 26th International World Wide Web Conference (WWW), Social Computing Workshop: Spatial Social Behavior Analytics on the Web*, Perth, Australia, pp. 1343-1351, April 2017.

3. E Ataie, E Gianniti, D Ardagna and A Movaghar, A Combined Analytical Modeling Machine Learning Approach for Performance Prediction of MapReduce Jobs in Cloud Environment, *Proceedings of the 18th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC)*, Timisoara, Romania, pp. 431-439, September 2016.
4. S. M. Morshedi, H. Mahyar and A. Movaghar, Influence-based Community Detection in Social Recommender Systems, *Proceedings of the European Conference on Social Networks (EUSN 2016)*, Paris, France, June 2016.
5. S. M. Taheri, H. Mahyar, M. Firouzi and A. Movaghar, Similarity-based Ranking of User Influence in Bipartite Social Networks, *Proceedings of the European Conference on Social Networks (EUSN 2016)*, Paris, France, June 2016.
6. H. Mahyar, H. R. Rabiee, A. Movaghar, R. Hasheminezhad, E. Ghalebi, and A. Nazemian, A low-cost sparse recovery framework for weighted networks under compressive sensing, *Proceedings of the IEEE International Conference on Social Computing and Networking (SocialCom 2015)*, Chengdu, China, pp. 183-190, December 2015.
7. H. Mahyar, H. R. Rabiee, A. Movaghar, E. Ghalebi, and A. Nazemian, CS-ComDet: A compressive sensing approach for inter-community detection in social networks, *Proceedings of the IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2015)*, Paris, France, pp. 89-96, August 2015.
8. S. Aliakbary, J. Habibi and A. Movaghar, Quantification and Comparison of Degree Distributions in Complex Networks, *Proceedings of the 7th International Symposium on Telecommunications (IST 2014)*, Tehran, Iran, 2014.
9. A. Froozani, M. Gharib, A.M.A. Hemmatyar, A. Movaghar, A Novel Human Mobility Model for MANETs Based on Real Data, *Proceedings of the 23rd International Conference on Computer Communications and Networks (ICCCN 2014)*, Shanghai, China, August 4-7, 2014.
10. Z. Moradlu, M. A. Doostari, M. Gharib. A. Movaghar, Fully Distributed Self Certified Key Management for Large-Scale MANETs, *Proceedings of the 10th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC-2013)*, Vietri sul Mare, Italy, December 18-20, 2013.
11. M. Roohitavaf, R. Entezari-Maleki, and A. Movaghar, Availability Modeling and Evaluation of Cloud Virtual Data Centers, *Proceedings of the 19th IEEE International Conference on Parallel and Distributed Systems (ICPADS 2013)*, Seoul, South Korea, pp. 675-680, December 15-18, 2013.

12. M. Gharib, M. Minaei, M. Golakri, A. Movaghar, Expert key selection impact on the MANETs performance using a probabilistic key management algorithm, *Proceedings of the 6th International Conference on Security of Information and Networks (SIN 13)*, Aksaray, Turkey, November 26-28, 2013.
13. M. Gharib, E. Emam-Jomeh-Zadeh, A. Norouzifard, A. Movaghar, A novel probabilistic key management algorithm for large scale MANETs, *Proceedings of the 2013 27th IEEE International Conference on Advanced Information Networking and Applications (AINA13)*, Barcelona, Spain, pp. 349-356, March 25-28, 2013.
14. M. Abdoli, R. Entezari-Maleki, and A. Movaghar, A Rank-based Hybrid Algorithm for Scheduling Data- and Computation-intensive Jobs in Grid Environments, *Proceedings of the International Conference on Advanced Computing, Networking, and Informatics (ICACNI 2013)*, Advances in Intelligent and Soft Computing (AISC), Springer, Chhattisgarh, India, June 12-14, 2013.
15. M. H. Mobini, R. Entezari-Maleki, A. Movaghar, Biogeography-Based Optimization of Makespan and Reliability in Grid Computing Systems, *Proceedings of the IV International Congress on Ultra Modern Telecommunications and Control Systems (ICUMT 2012)*, IEEE, St. Petersburg, Russia, pp. 349-355, October 35, 2012.
16. M. Ashuri, H. Yousefi, A.M.A. Hemmatyar, A. Movaghar, FOMA: Flexible Overlay Multi-path Data Aggregation in Wireless Sensor Networks, *Proceedings of the 17th IEEE symposium on Computers and Communications (ISCC 2012)*, Cappadocia, Turkey, July 1-4, 2012.
17. S. Bahrami, H. Yousefi, A. Movaghar, DACA: Data-Aware Clustering and Aggregation in Query-Driven Wireless Sensor Networks, *Proceedings of the 21st International Conference on Computer Communication Networks (IEEE ICCCN12)*, Germany, pp. 1-7, 2012.
18. I. Nikseresht, H. Yousefi, A. Movaghar, M. Khansari, Interference-Aware Multipath Routing for Video Delivery in Wireless Multimedia Sensor Networks, *Proceedings of the 32nd IEEE International Conference on Distributed Computing Systems Workshops (IEEE ICDCSW'12)*, China, pp. 216-221, 2012.
19. F. Ghassemi, M. Talebi, A. Movaghar, W. J. Fokkink, Stochastic Restricted Broadcast Process Theory, *Proceedings of the 8th European Performance Engineering Workshop (EPEW'11)*, Vol. 6977, LNCS, pp. 72-86, Springer, 2011.

20. R. Entezari-Maleki and A. Movaghar, Availability Modeling of Grid Computing Environments Using SANs, *The Proceedings of the 19th International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2011)*, IEEE, Split, Croatia, pp. 1-6, September 15-17, 2011.
21. Naser Alinaghipour, Hamed Yousefi, Mohammad Hossein Yeganeh, Ali Movaghar, Long Lifetime Real-time Routing in Unreliable Wireless Sensor Networks, *Proceedings of the 4th IEEE/IFIP Wireless Days (IEEE/IFIP WD'11)*, pp. 1-6, 2011.
22. Mohammad Hossein Yeganeh, Hamed Yousefi, Naser Alinaghipour, Ali Movaghar, RDAG: A Structure-free Real-time Data Aggregation Protocol for Wireless Sensor Networks, *Proceedings of the 17th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (IEEE RTCSA'11)*, pp. 51-60, 2011.
23. Leila Eskandari, Hamed Yousefi, Ali Movaghar, Mohammad Khansari, IMAC: An Interference-aware Duty-cycle MAC Protocol for Wireless Sensor Networks Employing Multipath Routing, *Proceedings of the 9th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (IEEE/IFIP EUC'11)*, pp.288-293, 2011.
24. Ali Barati , S. Jalaludin Dastgheib, Ali Movaghar and Iman Attarzadh, An Optimized Algorithm to Detect Faulty Readings along the Substrate Access Wireless Long-Thin Sensor Networks, *Proceedings of the 2011 UK-Sim 13th International Conference on Computer Modelling and Simulation (UKSim)*, Emmanuel College, Cambridge, United Kingdom, pp. 372-377, 30 March - 1 April 2011.
25. Reza Entezari-Maleki and Ali Movaghar, Availability Modeling of Grid Computing Environments Using SANs, *Proceedings of the 19th International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2011)*, IEEE, Split, Croatia, September 15-17, 2011.
26. Zohreh Mousavinasab, Reza Entezari-Maleki and Ali Movaghar, A Bee Colony Task Scheduling Algorithm in Computational Grids, *Proceedings of the International Conference on Digital Information Processing and Communication (ICDIPC 2011)*, *Communications in Computer and Information Science (CCIS)*, Vol. 188, Springer press, pp. 200-210, Ostrava, Czech Republic, July 7-9, 2011.
27. Nabil Tabbaa, Reza Entezari-Maleki and Ali Movaghar, A Fault Tolerant Scheduling Algorithm for DAG Applications in Cluster Environments, *Proceedings of the International Conference on Digital Information Processing and Communication (ICDIPC 2011)*, *Communications in Com-*

- puter and Information Science (CCIS), Vol. 188, Springer press, pp. 189-199, Ostrava, Czech Republic, July 7-9, 2011.
28. Hamed Yousefi, Mohammad Hossein Yeganeh, Ali Movaghar, Long Lifetime Routing in Unreliable Wireless Sensor Networks, *Proceedings of the 8th IEEE International Conference on Networking, Sensing and Control (IEEE ICNSC'11)*, pp. 457-462, April 2011.
 29. Sepideh Afkhami-Goli, Hamed Yousefi, and Ali Movaghar, An Efficient Distributed Cluster-head Election Technique for Load Balancing in Wireless Sensor Networks, *Proceedings of the 6th International Conference on Intelligent Sensors, Sensor Networks and Information Processing (IEEE ISSNIP'10)*, pp. 227-232, 2010.
 30. Reza Entezari-Maleki and Ali Movaghar, A Genetic-Based Scheduling Algorithm to Minimize the Makespan of the Grid Applications, *Proceedings of the Grid and Distributed Computing Conference (GDC 2010), Communications in Computer and Information Science (CCIS), Vol. 121, Springer press*, pp. 22-31, Jeju Island, South Korea, December 13-15, 2010.
 31. Fatemeh Ghassemi, Ali Movaghar, Wan Fokkink, Performance Evaluation of Mobile Ad Hoc Network Protocols, *Proceedings of the 10th International Conference on Application of Concurrency to System Design (ACSD 2010)*, Braga, Portugal, June 21-25, 2010.
 32. Sh. Khomejani and A. Movaghar, Privacy Consideration for Trustworthy Vehicular Ad hoc Networks, *Proceedings of the 2010 International Conference on Electronics and Information Engineering (ICEIE 2010)*, pp. 437-442, Kyoto, Japan, 2010.
 33. Nima Attarzadeh, Ali Barati and Ali Movaghar, A New Method for Coverage in Wireless Sensor Networks, *Proceedings of the Eighth IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC-09)*, Chengdu, China, pp. 369-372, December 12-14, 2009.
 34. Ehsan Kharazi, Ali Barati and Ali Movaghar, Improvement of Fault Detection in Wireless Sensor Networks, *Proceedings of the 2009 ISECS International Colloquium on Computing, Communication, Control, and Management (CCCM09)*, Canya, China, pp. 644-646, August 8-9, 2009.
 35. Ali Barati, Mohammad Ali, Khosh Kholghi and Ali Movaghar, Recovery of Sensors in Wireless Sensor Networks, *Proceedings of the Fifth International Joint Conference on INC, IMS and IDC (NCM 2009)*, Seoul, Korea, pp. 393-396, August 25-27, 2009.

36. Ehsan Heidari and Ali Movaghar, Intelligent Clustering in Wireless Sensor Networks, *Proceedings of the First International Conference on Networks and Communications (NetCoM 2009)*, Chennai, India, pp. 12-17, December 27-29, 2009.
37. Ehsan Allahyar and Ali Movaghar, Weighted start-time fair queuing: a new start-time fair queuing for elastic traffic, *Proceedings of the 12th Communications and Networking Simulation Symposium (CNS)*, San Diego, CA, 2009.
38. M.H. Khaledi, S.M. Mousavi, H.R. Rabiee, A. Movaghar, M.J. Khaledi and O. Ardakanian, Mobility Aware Distributed Topology Control in Mobile Ad hoc Networks using Mobility Pattern Matching, *Proceedings of the 5th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WIMOB'09)*, Marakesh, Morocco, pp. 453-458, 2009.
39. H. Seifzadeh, A.A. Pourhaji Kazem, M. Kargahi and A. Movaghar, A Method for Dynamic Software Updating in Real-Time Systems, *Proceedings of the 8th IEEE/ACIS International Conference on Computer and Information Science (ICIS 2009)*, Shanghai, China, pp. 34-38, June 1-3, 2009.
40. A.A. Pourhaji Kazem, H. Seifzadeh, M. Kargahi, A. Movaghar and S. Lotfi, Maximizing the Accrued Utility of an Isochronal Soft Real-Time System Using Genetic Algorithms, *Proceedings of the 8th IEEE/ACIS International Conference on Computer and Information Science (ICIS 2009)*, Shanghai, China, pp. 65-69, June 1-3, 2009.
41. F. Ghassemi and A. Movaghar, Equational Reasoning on Ad Hoc Networks, *Proceedings of the 3rd International Conference on Fundamentals of Software Engineering (FSEN'09)*, Kish Island, Persian Gulf, Iran, pp. 41-55, 15-17 April 2009.
42. M. Bashari, A. Movaghar and M. Izadi, Checking Equivalence of Reo Networks Using Chaos-free Failures Divergences, *Proceedings of 3rd International Conference on Fundamentals of Software Engineering (FSEN'09)*, Kish Island, Persian Gulf, Iran, pp. 429-432, April 15-17, 2009.
43. F. Ghassemi and A. Movaghar, Modeling Routing Protocols in Ad Hoc Networks, *Proceedings of 13th International CSI Computer Conference*, Kish Island, Persian Gulf, Iran, pp. 419-426, March 2008.
44. F. Saremi, H. Mashayekhi, A. Movaghar and R. Jalili, CEBAC: A Decentralized Cooperation Enforcement Based Access Control Framework in MANETs, *Proceedings of 13th International CSI Computer Conference*, Kish Island, Persian Gulf, Iran, pp. 427-434, March 2008.

45. H. Mousavi and A. Movaghar, Challenges in Using Peer-to-Peer Structures in Order to Design Large-Scale Web Search, *Proceedings of 13th International CSI Computer Conference*, Kish Island, Persian Gulf, Iran, pp. 461-468, March 2008.
46. M. Mahdavi, R. Forsati and A. Movaghar, Bandwidth-Delay Constrained Least Cost Multicast Routing for Multimedia Communication, *Proceedings of 13th International CSI Computer Conference*, Kish Island, Persian Gulf, Iran, pp. 737-740, March 2008.
47. M. Sharafi, F. Shams and A. Movaghar, Using Team Automata in Operational Modeling and Evaluation of Software Architecture, *Proceedings of 13th Annual CSI Computer Conference*, Kish Island, Persian Gulf, Iran, March 2008 (in Persian).
48. M. Sharifpanah and A. Movaghar, Clustering Deep Web Sites Using Common Link Graph, *Proceedings of 13th Annual CSI Computer Conference*, Kish Island, Persian Gulf, Iran, March 2008 (in Persian).
49. M. Hasanlo, S.A. Moghaddam, M. Shahkaramy and A. Movaghar, Performance Evaluation of some Routing Protocols in Mobile Ad Hoc Networks under Different Network Size, Traffic and Node Mobility Conditions, *Proceedings of 13th Annual CSI Computer Conference*, Kish Island, Persian Gulf, Iran, March 2008 (in Persian).
50. R. Matinnejad and A. Movaghar, Modeling and Performance Evaluation of an MMS System with a Retransmitted Message Traffic, *Proceedings of 13th Annual CSI Computer Conference*, Kish Island, Persian Gulf, Iran, March 2008 (in Persian).
51. M. Efatparvar, M.R. Efatparvar, M. Dehghan, A. Movaghar, Introducing a Local Retrieval Method Based on ODMRP Multicast Protocol in Wireless Mobile Ad-Hoc Networks, *Proceedings of 13th Annual CSI Computer Conference*, Kish Island, Persian Gulf, Iran, pp. 656-663, March 2008 (in Persian).
52. H. Barati, A. Movaghar, A. Barati and A. A. Mazreah, A Review of Coverage and Routing for Wireless Sensor Networks, *Proceedings of World Academy of Science, Engineering and Technology*, Volume 27, pp. 312-318, February 2008.
53. S. Taheri, A. Irandoost and A. Movaghar, Coin: A COverage INcreasing Algorithm in Mixed Sensor Networks, *Proceedings of IEEE 2007 International Conference on Sensor Technologies and Applications (SENSORCOMM 2007)*, Valencia, Spain, pp. 271-276, October 14-20, 2007.

54. M. Haghpanah, M. Akhoondi, M. Kargar and A. Movaghar, Trusted secure routing for ad hoc networks, *Proceedings of the 5th ACM international workshop on Mobility Management and Wireless Access*, Chania, Greece, pp.176-179, 2007
55. S. Shirali-Shahreza, M. Shirali-Shahreza and A. Movaghar, Exam HIP, *Proceedings of the 2007 IEEE Xiamen International Workshop on Security, Anti-Counterfeiting, Identification (2007ASID)*, Xiamen, China, April 16 -17, 2007.
56. S. Shirali-Shahreza, M. Shirali-Shahreza and A. Movaghar, Restricted Access to Exam Grades on the Web by HIP, to appear in the *Proceedings of the IEEE International Workshop on e-Activity (IEEE-IWEA 2007)*, Melbourne, Australia, July 11-13, 2007.
57. S. Shirali-Shahreza and A. Movaghar, A New Anti-Spam Protocol Using CAPTCHA, *Proceedings of the 2007 IEEE International Conference on Networking, Sensing and Control (IEEE ICNSC 07)*, London, United Kingdom, April 15-17, 2007.
58. A. Barati and A. Movaghar, Dependable and Secure Data Storage and Retrieval in Ad-Hoc Networks, *Proceedings of the 1st International Conference on Digital Communications and Computer Applications (DCCA2007)*, Ibrid, Jordan , pp. 1299-1305, March 19-22, 2007.
59. H. Mousavi, M.E. Rafiei and A. Movaghar, Characterizing the Web Using a New Uniform Sampling Approach, *Proc. of the 2nd IEEE/Create-Net/ICST Int'l Conf. on COMMunication System softWARE and MiddlewaRe (COMSWARE 2007)*, Banglore, India, January 7-12, 2007.
60. M. Omid, B. Takhtaei, H. Mousavi and A. Movaghar, Determining Geographical Coordinations of the Internet Nodes, *Proceedings of 12th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 536-543, January 2007 (in Persian).
61. A. Barati, A. Movaghar, M.R. Eslami Nejad and A. Bazrgar, Presenting an On-Demand Routing Algorithm for Wireless Mobile Ad-Hoc Networks, *Proceedings of 12th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 656-663, January 2007 (in Persian).
62. M.R. Eslami Nejad, A. Movaghar, A. Bazrgar and A. Barati, Improving the Performance of File Sharing Services in Wireless Mobile Peer to Peer Networks, *Proceedings of 12th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 703-710, January 2007 (in Persian).

63. M. Ghazi Asgar and A. Movaghar, A Neural Network Based Algorithm for Routing in Multistage Interconnection Networks, *Proceedings of 12th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 605-611, January 2007 (in Persian).
64. M. Nouri Baygi and A. Movaghar, Probabilistic Model Checking: A Comparison of GPMC versus PRISM, *Proceedings of 12th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 2308-2311, January 2007.
65. M. Abdollahi Azgomi and A. Movaghar, Modeling and Evaluation of Software Systems with Object Stochastic Activity Networks, *Proc. of the Int'l Conf. on Software Engineering Advances (ICSEA'06)*, Tahiti, French Polynesia, Oct. 29 - Nov. 1, 2006.
66. M. Abdollahi Azgomi and A. Movaghar, Efficient Evaluation of CSAN Models by State Space Analysis Methods, *Proc. of the Int'l Conf. on Software Engineering Advances (ICSEA'06)*, Tahiti, French Polynesia, Oct. 29 - Nov. 1, 2006.
67. M. Abdollahi Azgomi and A. Movaghar, A Case Study on Application of CSAN Models on Network Modeling, *Proc. of the 5th Int'l Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP'06)*, Patras, Greece, pp. 270-274, July 19 - July 21, 2006.
68. S. Aliakbarian, M. Movaghar, F. Sadeghi, P. Haghani and N.S. Mirsattari, Neighbor Definition in P2P Networks, *Proceedings of the 2006 International Conference on Communications, Circuits and Systems (ICC-CAS2006)*, Gui Lin, China, pp. 1562-1565, June 25 - June 28, 2006.
69. M.M. Jaghoori, A. Movaghar and M. Sirjani, Modere: The Model-checking Engine of Rebeca, to appear in the *Proceedings of the 21st Annual ACM Symposium on Applied Computing (SAC 2006)*, Dijon, France, April 23-27.
70. M. Kargahi and A. Movaghar, Dynamic Routing of Real-Time Jobs among Parallel EDF Queues: A Performance Study, *Proceedings of 11th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 385-392, January 2006.
71. H. R. Shahriari, M. Sadegh Makarem, M. Sirjani, R. Jalili and A. Movaghar, Modeling and Verification of Complex Network Attacks Using an Actor-Based Language, *Proceedings of 11th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 152-158, January 2006.
72. R. Ghazali, A. Movaghar, Ant-Aodv Hybrid Routing Protocol In MANET, *Proceedings of 11th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 673-678, January 2006.

73. S. Jalili, G. Shahmohammadi and A. Movaghar, Requirement Analysis using NuSMV Model Checker, *Proceedings of 11th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 673-678, January 2006 (in Persian).
74. R. Ghazali, A. Movaghar, Improving DSR Routing Protocol in MANETs using Ant Colony Algorithm, *Proceedings of 11th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 552-559, January 2006 (in Persian).
75. M. Izadi and A. Movaghar, A Logic for Formal Specification of w-Automata, *Proceedings of 11th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 735-738, January 2006 (in Persian).
76. M. Farokhian and A. Movaghar, Automatic and Optimal Mapping of Rebeca to Parametric Constraint Automata, *Proceedings of 11th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 1022-1027, January 2006 (in Persian).
77. M. Farokhian and A. Movaghar, Classification and Comparison of the Performance of Hierarchical Routing Protocols in MANETs, *Proceedings of 11th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 1088-1095, January 2006 (in Persian).
78. A. Kamandi, M. Abdollahi Azgomi and A. Movaghar, Derivation and Evaluation of OSAN Models from UML Models of Business Processes, *Proceedings of the IPM International Workshop on Foundations of Software Engineering : Theory and Practice (FSEN 2005)*, Tehran, Iran, pp. 287-305, October 2005.
79. M. Izadi and A. Movaghar, An Equivalence Based Method for Compositional Verification of the Linear Temporal Logic of Constraint Automata, *Proceedings of the IPM International Workshop on Foundations of Software Engineering : Theory and Practice (FSEN 2005)*, Tehran, Iran, pp. 81-95, October 2005.
80. M. Kargahi and A. Movaghar, Non-Preemptive Earliest-Deadline-First Scheduling Policy: A Performance Study, *Proceedings of the International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS)*, Atlanta, Georgia, September 27-29, 2005.
81. M. Abdollahi Azgomi and A. Movaghar, Modeling and Evaluation of A Packet-Based Telecommunication Switching Center with HSAN Models, *Proceedings of the 13th International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2005)*, Split, Marina Frapa, Croatia, pp. 182-186, September 15-17, 2005.

82. M. Izadi and A. Movaghar, A Formal System for Compositional and Hierarchical Modeling and Verification Component-based Computing Systems, *Proceedings of the International Symposium on Telecommunications (IST2005)*, Shiraz, Iran, pp. 959-964, September 10-12, 2005.
83. M. Izadi and A. Movaghar, An Efficient Model Checking Algorithm for a Fragment of Mu-Calculus, *Proceedings of the 17th International Conference on Software Engineering and Knowledge Engineering (SEKE'2005)*, Taipei, Taiwan, July 2005.
84. M. Kargahi and A. Movaghar, A Stochastic DVS-Based Dynamic Power Management for Soft Real-Time Systems, *Proceedings of the 3-rd IEEE International Workshop on Mobility Management and Wireless Access (MobiWac)*, Maui, Hawaii, USA, June 13, 2005.
85. M. Sirjani, F. de Boer, A. Movaghar and A. Shali, Extended Rebeca: A Component-Based Actor Language with Synchronous Message Passing, *Proceedings of the Fifth International Conference on Application of Concurrency to System Design (ACSD 2005)*, Saint Malo, France, June 2005.
86. M. Izadi and A. Movaghar, A Formal Method for Specifying and Verifying the Consistency of Management Policies in Open Distributed Systems, *Proceedings of 2nd Annual Int. Conference on Information and Knowledge Technology*, Tehran, Iran, May 2005 (in Persian).
87. V.A. Olyaei and A. Movaghar, Detecting Network Intrusion Using a Fuzzy Neural Net Method, *Proceedings of 10th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 477-484, February 2005 (in Persian).
88. Z.K. Shariat Naseri, A. Movaghar, M.Ghods, and A. Mohammadi, Comparing Routing Protocols for Ad Hoc Networks Based on Energy Consumption, *Proceedings of 10th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 501-508, February 2005 (in Persian).
89. B. Shahrokh Zadeh, A. Movaghari, and M. Dehghan, A New Method for Improving the Performance of TCP in Mobile and Wireless Networks, *Proceedings of 10th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 509-517, February 2005 (in Persian).
90. E. Ataie and A. Movaghari, Energy-based Selfishness in Mobile Ad Hoc Networks, *Proceedings of 10th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 516-522, February 2005 (in Persian).
91. Z.K. Shariat Naseri, A. Movaghar, M.Ghods, and A. Mohammadi, Comparing Routing Protocols for Ad Hoc Networks Based on Their Performance, *Proceedings of 10th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 534-541, February 2005 (in Persian).

92. Z.K. Shariat Naseri, A. Movaghar, M.Ghods, and A. Mohammadi, Improving DSR Protocol Using Multicasting, *Proceedings of 10th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 542-549, February 2005 (in Persian).
93. M. Kargahi and A. Movaghar, Performance Analysis of a Dynamic Routing in Real-Time Parallel Queues, *Proceedings of 10th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 560-569, February 2005 (in Persian).
94. M. Izadi and A. Movaghar, Integrated Formal Methods: An Approach to Applying Formal Methods to Object-Oriented and Component-Based Systems, *Proceedings of 10th Annual Int. CSI Computer Conference*, Tehran, Iran, pp. 605-612, February 2005 (in Persian).
95. S. Jabbehdari, A. Movaghar, and M. Mirahmadi, Fairness of Two Level Hierarchical Scheduling Scheme for High-Speed Networks by Using SFQ and E-Loss, *Proc. of the 1st Int. Conf. on Information Technology 2004 (ICIT 2004)*, Istanbul, Turkey, pp. 125-128, December 2004.
96. M. Abdollahi Azgomi and A. Movaghar, Modeling and Evaluation with Object Stochastic Activity Networks, *Proc. of the 1st Int. Conf. on Quantitative Evaluation of Systems (QEST'04)*, Enschede, The Netherlands, Sept. 27-30, IEEE Computer Society Press, pp. 326-327, 2004.
97. M. Abdollahi Azgomi and A. Movaghar, Coloured Stochastic Activity Networks: Definitions and Behaviour, *Proc. of the 20th Annual UK Performance Engineering Workshop (UKPEW'04)*, Bradford, UK, July 7-8, pp. 297-308, 2004.
98. M. Kargahi and A. Movaghar, A Method for Performance Analysis of Earliest-Deadline-First Scheduling Policy, *Proceedings of the IEEE International Conference on Dependable Systems and Networks (DSN-2004)*, Florence, Italy, July 2004.
99. M. Abdollahi Azgomi and A. Movaghar, An Interchange Format for Stochastic Activity Networks Based on PNML, *Proceedings of the ICATPN'04 Satellite Workshop on the Definition, Implementation and Application of a Standard Interchange Format for Petri Nets (XML4PN'04)*, Bologna, Italy, pp. 1-10, June 26, 2004.
100. M. Abdollahi Azgomi and A. Movaghar, A Modelling Tool for Hierarchical Stochastic Activity Networks, *Proceedings of the 11th International Conference on Analytical and Stochastic Modelling Techniques and Application (EMS/ASMTA04)*, Magdeburg, Germany, pp. 141-146, June 13-16, 2004.

101. M. Sirjani, A. Shali, M. Jaghoori, H. Iravanchi, and A. Movaghar, A Front-End Tool For Automated Abstraction and Modular Verification of Actor-Based Models, *Proceedings of the Fourth International Conference on Application of Concurrency to system Design (ACSD 2004)*, Hamilton, Canada, June 2004.
102. A. Kamandi, M. Abdollahi Azgomi and A. Movaghar, A Tool for Modeling with Object Stochastic Activity Networks, *Proceedings of 9th Annual Int. CSI Computer Conference*, Tehran, Iran, February 2004 (in Persian).
103. S. Jabbekhadi, A. Movaghar and M. Mir Ahmadi, A New Two-Level Hierarchical Scheduling Method Using SFQ and E-LOSS, *Proceedings of 9th Annual Int. CSI Computer Conference*, Tehran, Iran, February 2004 (in Persian).
104. M. Karghahi and A. Movaghar, A New Approach for Performance Analysis of Earliest-Deadline-First Scheduling Policy, *Proceedings of 9th Annual Int. CSI Computer Conference*, Tehran, Iran, February 2004 (in Persian).
105. L. S. G. Ghandehari and A. Movaghar, An Authentication System in a Distributed Environment, *Proceedings of 9th Annual Int. CSI Computer Conference*, Tehran, Iran, February 2004 (in Persian).
106. M. Izadi and A. Movaghar, A New Algorithm for Model Checking in Mu-Calculus, *Proceedings of 9th Annual Int. CSI Computer Conference*, Tehran, Iran, February 2004 (in Persian).
107. M. Abdollahi Azgomi and A. Movaghar, Towards an Object-Oriented Extension for Stochastic Activity Networks, *Proceedings of 10th Workshop on Algorithms and Tools for Petri Nets (AWPN'03)*, Eichsttt, Germany, 2003, pp. 144-155, Sept. 26-27.
108. S.M.R. Mirsarraf and A. Movaghar, Improving the Performance of LZ78 Compression Algorithm in Tracking User of PCS, *Proceedings of the International Symposium on Telecommunications (IST2003)*, Isfahan, Iran, pp. 345-350, August 2003.
109. M. Abdollahi Azgomi and A. Movaghar, Coloured Stochastic Activity Networks: Preliminary Definitions and Properties, *Proceedings of the ICALP 2003 Satellite Workshop on Stochastic Petri nets and related formalisms*, Eindhoven, The Netherlands, pp. 154-169, June 2003.
110. A. Movaghar, On Dynamic Assignment of Impatient Customers to Parallel Queues, *Proceedings of the IEEE International Conference on Dependable Systems and Networks (DSN-2003)*, San Francisco, California, USA, pp. 751-759, June 2003.

111. M. Abdollahi Azgomi and A. Movaghar, Hierarchical Stochastic Activity Networks, *Proceedings of the 10th International Conference on Analytical and Stochastic Modeling Techniques and Application (ASMTA03)*, Nottingham, UK, pp. 169-174, June 2003.
112. M. Sirjani, A. Movaghar, H. Iravanchi, M. Jaghoori and A. Shali, Model Checking in Rebeca, *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'03)*, Las Vegas, Nevada, USA, CSREA Press, June 2003.
113. M. Sirjani, A. Movaghar, H. Iravanchi, M. Jaghoori and A. Shali, Model Checking Rebeca Code by SMV, *Proceedings of the Workshop on Automated Verification of Critical Systems (AVoCS'03)*, Southampton, UK, April 2003.
114. M. Izadi and A. Movaghar, A New Approach to Verification of Properties Specified in Mu-Calculus: Using Automata Theory, *Proceedings of 8th Annual Int. CSI Computer Conference*, Mashhad, Iran, March 2003 (in Persian).
115. M. Abdollahi Azgomi and A. Movaghar, Application of Stochastic Activity Networks on Network Modeling, *Proceedings of the 12th International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2002)*, Split, Dubrovnic, Croatia (also, Ancona, Venice, Italy), October 2002.
116. M. Abdollahi Azgomi and A. Movaghar, An Introduction to New Extensions for Stochastic Activity Networks, *Proceedings of the IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS 2002)*, Cambridge, Massachusetts, USA, November 2002, pp. 410-415.
117. M. Sirjani and A. Movaghar, An Object-Based Model for Agents, *Proceedings of the Workshop on Agents for Information Management (AIM'02)*, First EurAsian Conference on Advances in Information and Communication Technology (EURASIA-ICT 2002), Tehran, Iran, Austrian Computer Society, pp. 307-310, October 2002.
118. M. Sirjani and A. Movaghar, Simulation in Rebeca, *Proceedings of the Workshop on Automated Verification of Critical Systems (AVoCS'02)*, Oxford, UK, April 2002. Also appeared (in a condensed version) in the Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'02), Las Vegas, Nevada, USA, Vol. 2, CSREA Press, pp. 923-926, June 2002.
119. M. Nurolahzadeh and A. Movaghar, An Approach to Web Usage Mining, *Proceedings of 7th Annual Int. CSI Computer Conference*, Tehran, Iran, March 2002 (in Persian).

120. M.H. Khansari, A. Movaghar and S. Hessabi, Design and Simulation of A Tandem ATM Switch Based on FPGA, *Proceedings of the International Symposium on Telecommunications (IST2001)*, Tehran, Iran, September 2001.
121. M. Abdollahi Azgomi and A. Movaghar, SharifSAN: A Tool for Verification and Performance Evaluation Based on A New Definition of SANs, *Proceedings of the IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS 2001)*, Anaheim, California, USA, August 2001.
122. M. Sirjani, A. Movaghar and M.R. Mousavi, Compositional Verification of an Object-Based Model for Reactive Systems, *Proceedings of the Workshop on Automated Verification of Critical Systems (AVoCS'01)*, Oxford University Computing Laboratory, PRG-RR-01-07, Oxford, UK, April 2001.
123. M. Abdollahi Azgomi and A. Movaghar, Performance Evaluation of Computer and Communication Systems with SharifSAN, *Proceedings of 6th Annual Int. CSI Computer Conference*, Vol. 6, Isfahan, Iran, March 2001 (in Persian).
124. A. Movaghar and M. Abdollahi Azgomi, An Overview on Some Design and Implemental Features of SharifSAN, *Research Proceedings of Sharif University of Technology*, Computer Engineering Department, Tehran, Iran, 2000 (in Persian).
125. A. Movaghar, On queueing with customer impatience until the end of service, *Proceedings of the 4th IEEE International Computer Performance and Dependability Symposium*, Chicago, IL, March 2000.
126. M. Abdollahi Azgomi and A. Movaghar, A tool for the verification of concurrent systems based on activity networks, *Proceedings of 5th Annual Int. CSI Computer Conference*, Vol. 5, Tehran, Iran, March 2000 (in Persian).
127. K. Bamasian and A. Movaghar, Design and implementation of a multiplexer of ISDN data on E1 link with capability of transferring voice on a telephone network, *Proceedings of 5th Annual Int. CSI Computer Conference*, Vol. 5, Tehran, Iran, March 2000 (in Persian).
128. A. Movaghar and M. Abdollahi Azgomi, Introducing various solvers used in SharifSAN, *Research Proceedings of Sharif University of Technology*, Computer Engineering Department, Tehran, Iran, 1999 (in Persian).
129. A. Movaghar, K. Davoodi and M. Abdollahi Azgomi, Design and implementation of a firewall in computer networks, *Research Proceedings of Sharif University of Technology*, Computer Engineering Department, Tehran, Iran, 1999 (in Persian).

130. M. Firoozbakht and A. Movaghar, Reducing delay in HTTP protocol in high-speed networks, *Proceedings of 4th Annual Int. CSI Computer Conference*, Vol. 3, Tehran, Iran, pp. 369-375, January 1999 (in Persian).
131. S. Azodolmolki and A. Movaghar, An approach to congestion control mechanisms for interconnecting LANs using high-speed networks, *Proceedings of 4th Annual Int. CSI Computer Conference*, Vol. 3, Tehran, Iran, pp. 376-382, January 1999 (in Persian).
132. A. Movaghar and A. Nourollah, A review on temporal logic and its applications, *Research Proceedings of Sharif University of Technology*, Computer Engineering Department, Tehran, Iran, pp. 167-178, 1998 (in Persian).
133. A. Movaghar and M. Abdollahi Azgomi, Solutions for enhancing computer network security, *Research Proceedings of Sharif University of Technology*, Computer Engineering Department, Tehran, Iran, pp. 167-178, 1998 (in Persian).
134. M. Abdollahi Azgomi and A. Movaghar, Security enhancement for network services, *Proceedings of 3rd Annual Int. CSI Computer Conference*, Vol. 3, Tehran, Iran, pp. 450-457, December 1997 (in Persian).
135. R. Khosravi and A. Movaghar, Verification of concurrent systems using Actor models and temporal logic, *Proceedings of 3rd Annual Int. CSI Computer Conference*, Vol. 3, Tehran, Iran, pp. 56-63, December 1997 (in Persian).
136. H. Naderi and A. Movaghar, TAPESAN: A software tool for performance evaluation based on stochastic activity networks, *Proceedings of the 5th Iranian Conference on Electrical Engineering*, Vol. 5, Tehran, Iran, pp. 3103-3110, May 1997 (in Persian).
137. A. Movaghar, Stochastic activity networks: A new definition, *Proceedings of the IASTED International Conference on Modeling and Simulation*, Pittsburgh, PA, pp. 27-30, May 1997.
138. A. Movaghar and R. Khosravi, Investigating some important models of concurrency, *Research Proceedings of Sharif University of Technology*, Computer Engineering Department, Tehran, Iran, pp. 174-182, 1997 (in Persian).
139. S.M. Havaeji and A. Movaghar, Designing a gateway between a X.25 public network and an Ethernet local area network and implementing some parts of it, *Proceedings of the 2nd Annual CSI Computer Conference*, Tehran, Iran, pp. 174-182, Dec. 1996 (in Persian).

140. A. Movaghar, Performance measures for real-time systems, *Proceedings of the 3rd International Workshop on Performability Modeling of Computer and Communication Systems*, Bloomington, IL, Sept. 1996.
141. A. Movaghar, On queueing with customer impatience until the beginning of service, *Proceedings of the 2nd IEEE International Computer Performance and Dependability Symposium*, Urbana-Champaign, IL, pp. 150-157, Sept. 1996.
142. J.F. Meyer, A. Movaghar and W.H. Sanders, Stochastic Activity Networks: Structure, Behavior, and Application, *Proceedings Int. Workshop on Timed Petri Net*, Torino, Italy, pp. 106-115, Jul. 1985.
143. A. Movaghar and J.F. Meyer, Performability modeling with stochastic activity networks, *Proceedings of the 1984 Real-Time Systems Symposium*, Austin, TX, pp. 215-224, Dec. 1984.

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Title of thesis: Formal specification and verification of concurrent and real-time systems,

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Title of thesis: Novel models and scheduling algorithms for enhancing the performability of real-time systems,
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2006.
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Title of thesis: Application of Formal Methods in Verification and Evaluation of UML Models using Petri Nets,
Computer Engineering, Islamic Azad University-Science and Research Branch, Tehran, Iran, 2007.
7. Mohammad Izadi,
Title of thesis: An Integrated Formal Method for Specification and Verification of Component-Based Systems,
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2008.
8. Marjan Kuchaki Rafsanjani,
Title of thesis: Security Improvement based on Intrusion Detection Methods in Mobile Ad hHoc Networks,
Department of Computer Engineering, Islamic Azad University-Science and Research Branch, Tehran, Iran, 2008.
9. Fatemeh Ghassemi Esfahani,
Title of thesis: Formal Analysis of Ad Hoc Network Protocols Using Process Algebra,
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2011.
10. Sepideh Adabi,
Title of thesis: A negotiation model for dynamic assignment of grid resources based on intelligent agents.
Department of Computer Engineering, Islamic Azad University-Science and Research Branch, Tehran, Iran, 2012.
11. Reza Entezari Maleki,

- Title of thesis:* Performability Modeling and Analysis in Grid Computing,
Department of Computer Engineering, Sharif University of Technology,
Tehran, Iran, 2014.
12. Gholamreza Sotudeh,
Title of thesis: Formal Verification of Fuzzy Systems using Fuzzy Temporal Logic,
Department of Computer Engineering, Department of Computer Engineering, Islamic Azad University-Science and Research Branch, Tehran, Iran, Fall 2014.
13. Hamed Yousefi,
Title of thesis: Real-Time Data Aggregation in Wireless Sensor Networks,
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2015.
14. Sadegh Aliakbary,
Title of thesis: Social Network Simulation for Analyzing Social Interaction in a Decision Support System,
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2015.
15. Mohammad Gharib
Title of thesis: Key Management in Large Scale Mobile Ad Hoc Networks,
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2015.
16. Ali Barati,
Title of thesis: Reliable Data Transport in Real Time Wireless Sensor Networks Using Residue Number System.
Department of Computer Engineering, Islamic Azad University-Ghazvin Branch, Gazvin, Iran, Spring 2016.
17. Ehsan Ataei,
Title of thesis: Modeling and Evaluation of Performability in Cloud Computing Considering Power Consumption.
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2017.

18. Marzieh Malekimajd,
Title of thesis: Virtual Machines Allocation and Server Consolidation in Distributed Cloud.
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2018.
19. Hamidreza Mahyar,
Title of thesis: Efficient Detection of High Centrality Nodes in Social Networks.
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2018.
20. Mohammad Nikravan,
Title of thesis: Security Enhancement in IoT Communication Protocol Stack Layers.
Department of Computer Engineering, Islamic Azad University-Science and Research Branch, Tehran, Iran, February 2018.
21. Robabeh Ghafouri,
Title of thesis: Methods for Scheduling Loop-less Directed Graph with Deadlines and Specified Budget in Cloud Computing Environment.
Department of Computer Engineering, Islamic Azad University-Science and Research Branch, Tehran, Iran, July 2018.
22. Moslem Habibi,
Title of thesis: Collaboration Enhancement Models in Cloud Federation.
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2019.
23. Leila Rashidy,
Title of thesis: Analysis and Evaluation of Routing in Large Scale Delay Tolerant Networks.
Department of Computer Engineering, Sharif University of Technology, Tehran, Iran, 2019.
24. Shirin Baghoolizadeh,
Title of thesis: Model Checking of Continuous-time Stochastic Games.

Department of Computer Engineering, Sharif University of Technology,
Tehran, Iran, 2020.

25. Mahdiah Ahmadi,

Title of thesis: Performance Enhancement in Cache Networks.

Department of Computer Engineering, Sharif University of Technology,
Tehran, Iran, 2020.

26. Morteza Golkarifard,

Title of thesis: Flow Management with Service Chain Embedding in
Software-Defined Networks.

Department of Computer Engineering, Sharif University of Technology,
Tehran, Iran, 2021.

27. Maryam Bagheri

Title of thesis: Runtime Analysis of Self Adaptive System.

Department of Computer Engineering, Sharif University of Technology,
Tehran, Iran, 2021.

28. Soroush Karimian

Title of thesis: Modeling and Performance Evaluation of Map/Reduce
Programs.

Department of Computer Engineering, Sharif University of Technology,
Tehran, Iran, 2021.

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Title of thesis: A framework for users' privacy preserving of instant mes-
saging on mobile social networks.

Department of Computer Engineering, Sharif University of Technology,
Tehran, Iran, 2022.