

CURRICULUM VITAE

Ali Ghaffari, Ph.D.

Associate professor in Computer Engineering



Associated Professor, Department of Computer Engineering

RESEARCH INTERESTS

Computer networks

- Wireless and mobile networks (WSNs, MANETs, VANETs)
- Internet of things (IoT)
- Software Defined Network (SDN)
- Network security

LANGUAGES

Azerbaijani, Turkish, English, Persian

EDUCATION

- Ph.D.**
2007 – 2012
Islamic Azad University, Science and Research Branch, Tehran, Iran
Ph.D. in Computer Engineering, Computer architecture
Dissertation: QoS based routing scheme for wireless sensor networks (WSNs)
Supervisor: Prof. AmirMasoud Rahmani (Yountech university, Taiwan)
- M.Sc.**
2000 – 2002
Islamic Azad University, Science and Research Branch, Tehran, Iran
Master of Science in Computer Engineering, Computer Architecture
- B.Sc.**
1991 – 1995
Tehran university, Tehran, Iran
Bachelor of Science in Computer Engineering

COURSES TAUGHT

• **Graduate:**

- Advanced computer networks
- Computer networks management
- Advanced computer networks security

• **Undergraduate:**

- Computer networks
- Network security
- Logic circuits
- Wireless networks

PEER-REVIEWED PUBLICATION

Journal Papers

1. Asgharzadeh, H., **Ghaffari, A.**, Masdari, M., Gharehchopogh, FS., " [Anomaly-based Intrusion Detection System in the Internet of Things using a Convolutional Neural Network and Multi-Objective Enhanced Capuchin Search Algorithm](#)", *Journal of Parallel and Distributed Computing*, 2023. **(Q1, IF: 4.542)**
2. R. Mohammadi, S. Akleyek, and A. **Ghaffari**, "SDN-IoT: SDN-based efficient clustering scheme for IoT using improved Sailfish optimization algorithm," *PeerJ Computer Science*, vol. 9, p. e1424, 2023.
3. M. Nematollahi, A. **Ghaffari**, and A. Mirzaei, "Task and resource allocation in the internet of things based on an improved version of the moth-flame optimization algorithm," *Cluster Computing*, pp. 1-23, 2023.
4. S. S. Sefati, M. Abdi, and A. **Ghaffari**, "QoS-based routing protocol and load balancing in wireless sensor networks using the markov model and the artificial bee colony algorithm," *Peer-to-Peer Networking and Applications*, vol. 16, no. 3, pp. 1499-1512, 2023
5. A. V. Hanafi, A. **Ghaffari**, H. Rezaei, A. Valipour, and B. arasteh, "Intrusion detection in internet of things using improved binary golden jackal optimization algorithm and LSTM," *Cluster Computing*, pp. 1-18, 2023.

Rezvani, K., **Ghaffari, A.**, Ebrahimi M.R., "The Bedbug Meta-heuristic Algorithm to Solve Optimization Problems", *Journal of Bionic Engineering*, 2023. **(Q2, IF:2.995)**
6. Mohammadi, R., Akleyek, S., **Ghaffari, A.**, Shirmarz, A., "Taxonomy of traffic engineering mechanisms in software-defined networks: a survey", *Telecommunication Systems*, 2022. **(Q2, IF: 2.336)**
7. Mohammadi, R., Akleyek, S., **Ghaffari, A.**, Shirmarz, A., "Automatic delay-sensitive applications quality of service improvement with deep flows discrimination in software defined networks", *Cluster Computing*, 2023. **(Q2, IF:2.303)**
8. Rezaei, H., **Ghaffari, A.**, "QoS-based routing scheme in software-defined networks using fuzzy analytic hierarchy process", *Concurrency and Computation: Practice and Experience*, 2023. **(Q3, IF:1.831)**
9. Seyfollahi, A., Taami, T., **Ghaffari, A.**, "Towards developing a machine learning-metaheuristic-enhanced energy-sensitive routing framework for the internet of things" , *Microprocessors and Microsystems*, 2022. **(Q2, IF: 3.503)**
10. Rezaei, M., **Ghaffari, A.**, "QoS-based routing scheme in software defined networks using fuzzy analytic hierarchy process", *Concurrency and Computation: Software and Experience*, 2023. **(Q3, IF:1.831)**
11. Rezvani K., **Ghaffari A.**, Ebrahimi Dishabi M.R., "The [Bedbug Meta-heuristic algorithm to solve optimization problem](#)", *Journal of Bionic Engineering*, 2023. **(Q2, IF: 2.995)**

12. Kheradmand, B., Ghaffari, A., Soleimani Gharehchopogh, F., Masdari, M., "[Clustering-based routing protocol using gray wolf optimization and technique for order of preference by similarity to ideal solution algorithms in the vehicular ad hoc networks](#)". *Concurrency and Computation: Practice and Experience*, 2022. (Q3, IF:)
13. Shirmarz, A., Ghaffari, A., "[Taxonomy of controller placement problem \(CPP\) optimization in Software Defined Network \(SDN\): a survey](#)", *Journal of Ambient Intelligence and Humanized Computing*, 2021, <https://doi.org/10.1007/s12652-020-02754-w>. (Q1, IF: 7.104)
14. Seyfollahi, A., Abeshloo H., Ghaffari, A., "[Enhancing mobile crowdsensing in Fog-based Internet of Things utilizing Harris hawks optimization](#)", *Journal of Ambient Intelligence and Humanized Computing*, 2021: p. 1-16, <https://doi.org/10.1007/s12652-021-03344-0>. (Q1, IF: 7.104)
15. Seyfollahi, A., Ghaffari, A., "[A lightweight load balancing and route minimizing solution for routing protocol for low-power and lossy networks](#)", *Computer Networks*, 2020. 179: p. 107368, <https://doi.org/10.1016/j.comnet.2020.107368>. (Q1, IF: 4.474)
16. Choshin, M., Ghaffari, A., "[An investigation of the impact of effective factors on the success of e-commerce in small-and medium-sized companies](#)", *Computers in Human Behavior*, 2017. 66: p. 67-74, DOI 10.1007/s11276-015-1180-0. (Q1, IF: 6.829)
17. Masoudi, R., Ghaffari, A., "[Software defined networks: A survey](#)", *Journal of Network and computer Applications*, 2016. 67: p. 1-25, <https://doi.org/10.1016/j.jnca.2016.03.016>. (Q1, IF: 6.281)
18. Mousavi, S.K., Ghaffari, A., Besharat, S., Afshari, H., "[Improving the security of internet of things using cryptographic algorithms: A case of smart irrigation systems](#)", *Journal of Ambient Intelligence and Humanized Computing*, 2021. 12(2): p. 2033-2051, <https://doi.org/10.1007/s12652-020-02303-5>. (Q1, IF: 7.104)
19. Mirzaee, S., Ghaffari, A., "[Investigating the impact of information systems on knowledge sharing](#)", *Journal of Knowledge Management*, 2018, <https://doi.org/10.1108/JKM-08-2017-0371>. (Q1, IF: 8.182).
20. Ghaffari, A., "[Hybrid opportunistic and position-based routing protocol in vehicular ad hoc networks](#)", *Journal of Ambient Intelligence and Humanized Computing*, 2020. 11(4): p. 1593-1603, <https://doi.org/10.1007/s12652-019-01316-z>. (Q1, IF: 7.104).
21. Ghaffari, A., "[Congestion control mechanisms in wireless sensor networks: A survey](#)", *Journal of network and computer applications*, 2015. 52: p. 101-115, <https://doi.org/10.1016/j.jnca.2015.03.002>. (Q1, IF: 6.281).
22. Jazebi, S.J., Ghaffari, A., "[RISA: routing scheme for Internet of Things using shuffled frog leaping optimization algorithm](#)", *Journal of Ambient Intelligence and Humanized Computing*, 2020: p. 1-11, <https://doi.org/10.1007/s12652-020-01708-6>. (Q1, IF: 7.104).
23. Tamizi, S. Ghaffari, A., "[Inference search algorithm for optimizing scheduling and minimizing mean tardiness in parallel joint robots](#)", *Journal of Ambient Intelligence and Humanized Computing*, 2019. 10(12): p. 4771-4783, <https://doi.org/10.1007/s12652-018-1155-y>. (Q1, IF: 7.104).
24. Seyfollahi, A. Moodi, M. Ghaffari, A., "[MFO-RPL: A secure RPL-based routing protocol utilizing moth-flame optimizer for the IoT applications](#)", *Journal of Computer Standards & Interfaces*, 2022, 82, 103622. <https://doi.org/10.1016/j.csi.2022.103622>. (Q2, IF: 2.487).
25. Shirmarz, A., Ghaffari, A., 2021. "[A novel flow routing algorithm based on non-dominated ranking and crowd distance sorting to improve the performance in SDN](#)", *Photonic Network Communications*, 42(3), pp.167-183. <https://doi.org/10.1007/s11107-021-00951-x>. (Q2, IF: 2.028).
26. Shirmarz, A. and Ghaffari A., "[Automatic Software Defined Network \(SDN\)](#)

- [Performance Management Using TOPSIS Decision-Making Algorithm](#)", *Journal of Grid Computing*, 2021. 19(2): pp. 1-21, <https://doi.org/10.1007/s10723-021-09557-z>. (Q2, IF: 3.986).
27. Mousavi, S.K., Ghaffari, A., "[Data cryptography in the Internet of Things using the artificial bee colony algorithm in a smart irrigation system](#)", *Journal of Information Security and Applications*, 2021. 61: p. 102945, <https://doi.org/10.1016/j.jisa.2021.102945>. (Q2, IF: 3.872)
 28. Jafarian, T., Masdari, M., Ghaffari, A., soleimani gharechopogh, F., "[SADM-SDNC: security anomaly detection and mitigation in software-defined networking using C-support vector classification](#)", *Computing*, 2021. 103(4): p. 641-673, <https://doi.org/10.1007/s00607-020-00866-x>. (Q2, IF: 2.220)
 29. Shirmarz, A., Ghaffari, A., "[Performance issues and solutions in SDN-based data center: a survey](#)", *The Journal of Supercomputing*, 2020. 76(10): p. 7545-7593. (Q2, IF: 2.474).
 30. Seyfollahi, A., Ghaffari, A., "[Reliable data dissemination for the Internet of Things using Harris hawks optimization](#)", *Peer-to-Peer Networking and Applications*, 2020. 13(6): p. 1886-1902, <https://doi.org/10.1007/s12083-020-00933-2>. (Q2, 3.307)
 31. Dibaei, M., Ghaffari, A., "[Full-duplex medium access control protocols in wireless networks: a survey](#)", *Wireless Networks*, 2020. 26(4): p. 2825-2843, <https://doi.org/10.1007/s11276-019-02242-w>. (Q2, IF: 2.602).
 32. Mohammadnezhad, M., Ghaffari, A., "[Hybrid routing scheme using imperialist competitive algorithm and RBF neural networks for VANETs](#)", *Wireless Networks*, 2019. 25(5): p. 2831-2849, <https://doi.org/10.1007/s11276-019-01997-6>. (Q2, IF: 2.602).
 33. Okhdar, M., Ghaffari, A., "[English vocabulary learning through recommender system based on sentence complexity and vocabulary difficulty](#)", *Kybernetes*, 2018, <https://doi.org/10.1108/K-06-2017-0198>. (Q2, IF: 2.235).
 34. Vahideh, H., Pourhaji Kazem, A.A., Pourghebleh, B., Ghaffari, A., "[Exploring the state-of-the-art service composition approaches in cloud manufacturing systems to enhance upcoming techniques](#)", *The International Journal of Advanced Manufacturing Technology*, 2019. 105(1-4): p. 471-498, <https://doi.org/10.1007/s00170-019-04213-z>. (Q2, IF: 3.226).
 35. Bagherlou, H., Ghaffari, A., "[A routing protocol for vehicular ad hoc networks using simulated annealing algorithm and neural networks](#)", *The journal of supercomputing*, 2018. 74(6): p. 2528-2552, <https://doi.org/10.1007/s11227-018-2283-z>. (Q2, IF: 2.474).
 36. Ghebleh, R., Ghaffari, a., "[A multi-criteria method for resource discovery in distributed systems using deductive fuzzy system](#)", *International Journal of Fuzzy Systems*, 2017. 19(6): p. 1829-1839, <https://doi.org/10.1007/s40815-016-0274-x>. (Q2, IF:4.673).
 37. Ghaffari, A., "[Real-time routing algorithm for mobile ad hoc networks using reinforcement learning and heuristic algorithms](#)", *Wireless Networks*, 2017. 23(3): p. 703-714, DOI 10.1007/s11276-015-1180-0. (Q2, IF: 2.602).
 38. Oskouei, S.M., Ghaffari, A., "[Designing a new reversible ALU by QCA for reducing occupation area](#)", *The Journal of Supercomputing*, 2019. 75(8): p. 5118-5144, <https://doi.org/10.1007/s11227-019-02788-8>. (Q2, IF: 2.474).
 39. Tavizi, A., Ghaffari, A., "[Tree-based reliable and energy-aware multicast routing protocol for mobile ad hoc networks](#)", *The Journal of Supercomputing*, 2018. 74(11): p. 6310-6332, <https://doi.org/10.1007/s11227-018-2562-8>. (Q2, 2.474).
 40. Mousavi, S.K., Ghaffari, A., Besharat, S., Afshari, H., "[Security of internet of things based on cryptographic algorithms: a survey](#)", *Wireless Networks*, 2021. 27(2): p. 1515-1555, <https://doi.org/10.1007/s11276-020-02535-5>. (Q2, 2.602).
 41. Seyfollahi, A., Ghaffari, A., "[Review of Intrusion Detection Systems in RPL](#)

- [Routing Protocol Based on Machine Learning for Internet of Things Applications](#)", *Wireless Communications and Mobile Computing*, 2021. 2021, <https://doi.org/10.1155/2021/8414503>. (Q3, IF: 2.336).
42. Sefati, S., Abdi M., Ghaffari, A., "[Cluster-based data transmission scheme in wireless sensor networks using black hole and ant colony algorithms](#)", *International Journal of Communication Systems*, 2021. 34(9): p. e4768, <https://doi.org/10.1002/dac.4768>. (Q3, IF: 2.047).
 43. Mousavi, S.K., Ghaffari, A., Besharat, S., Afshari, H., "[Security of Internet of Things using RC4 and ECC Algorithms \(Case Study: Smart Irrigation Systems\)](#)", *Wireless Personal Communications*, 2021. 116(3): p. 1713-1742, <https://doi.org/10.1007/s11277-020-07758-5>. (Q4, IF: 1.671).
 44. Jafarian, T., Masdari, M., Ghaffari, A., Soleimanian Gharechopogh, F., "[A survey and classification of the security anomaly detection mechanisms in software defined networks](#)", *Cluster Computing*, 2021. 24(2): p. 1235-1253, <https://doi.org/10.1007/s10586-020-03184-1>. (Q3, IF: 1.809)
 45. Mousavi, S.K., Ghaffari, A., "[Cluster-based Coverage Scheme for Wireless Sensor Networks using Learning Automata](#)", *Journal of Information Systems and Telecommunication (JIST)*, 2021. 3(35): p. 197, 10.52547/jist.9.35.197.
 46. Shirmarz, A., Ghaffari, A., "[An autonomic Software Defined Network \(SDN\) architecture with performance improvement considering](#)", *Information Systems & Telecommunication*, 2020: p. 121.
 47. Shirmarz, A., Ghaffari, A., "[An adaptive greedy flow routing algorithm for performance improvement in software-defined network](#)", *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, 2020. 33(1): p. e2676. (Q3, IF: 1.296).
 48. Samadi Bonab, M., Ghaffari, A., Soleimanian gharechopogh, F., "[A wrapper-based feature selection for improving performance of intrusion detection systems](#)", *International Journal of Communication Systems*, 2020. 33(12): p. e4434, <https://doi.org/10.1002/dac.4434>. (Q3, IF: 2.047)
 49. Jafarian, T., Masdari, M., Ghaffari, A., Soleimanian Gharechopogh, F., "[Security anomaly detection in software-defined networking based on a prediction technique](#)", *International Journal of Communication Systems*, 2020: p. e4524, <https://doi.org/10.1002/dac.4524>. (Q3, IF:2.047)
 50. Mahdavi, A., Ghaffari, A. "[Embedding Virtual Machines in Cloud Computing Based on Big Bang–Big Crunch Algorithm](#)", *Journal of Information Systems and Telecommunication (JIST)*, 2020. 4(28): p. 305, 10.7508/jist.2019.04.006.
 51. Shirmarz, A., Ghaffari, A., "[An Autonomic Software Defined Network \(SDN\) Architecture With Performance Improvement Considering](#)", *Journal of Information Systems and Telecommunication (JIST)*, 2020. 2(30): p. 121.
 52. Akhbari, A., Ghaffari, A., "[Selfish node Detection Based on Fuzzy Logic and Harris Hawks Optimization Algorithm in IoT Networks](#)", *Security and Communication Networks*, 2021. <https://doi.org/10.1155/2021/2658272>. (Q4, IF:1.791)
 53. Tabibi, S., Ghaffari, A., "[Energy-efficient routing mechanism for mobile sink in wireless sensor networks using particle swarm optimization algorithm](#)", *Wireless Personal Communications*, 2019. 104(1): p. 199-216, <https://doi.org/10.1007/s11277-018-6015-8>. (Q4, IF: 1.671).
 54. Mosavvar, I., Ghaffari, A., "[Data aggregation in wireless sensor networks using firefly algorithm](#)", *Wireless Personal Communications*, 2019. 104(1): p. 307-324, <https://doi.org/10.1007/s11277-018-6021-x>. (Q4, IF: 1.671).
 55. Mohammadi, P. , Ghaffari, A., "[Defending Against Flooding Attacks in Mobile Ad-Hoc Networks Based on Statistical Analysis](#)", *Wireless Personal Communications*, 2019. 106(2). (Q4, IF: 1.671).
 56. Beheshtiasl, A., Ghaffari, A., "[Secure and trust-aware routing scheme in wireless](#)

- [sensor networks](#)", *Wireless Personal Communications*, 2019. 107(4): p. 1799-1814, <https://doi.org/10.1007/s11277-019-06357-3>. (Q4, IF: 1.671).
57. Pourakbar, H., Ghaffari, A., "[Reliable and Real-Time End-to-End Delivery Protocol in Wireless Sensor Networks](#)", arXiv preprint arXiv:1803.03958, 2018.
 58. Parsavand, H., Ghaffari, A., "[Controlling congestion in wireless sensor networks through imperialist competitive algorithm](#)", *Wireless Personal Communications*, 2018. 101(2): p. 1123-1142, <https://doi.org/10.1007/s11277-018-5752-z>. (Q4, IF: 1.671).
 59. Mottaghinia, Z., Ghaffari, A., "[Fuzzy logic based distance and energy-aware routing protocol in delay-tolerant mobile sensor networks](#)", *Wireless Personal Communications*, 2018. 100(3): p. 957-976, <https://doi.org/10.1007/s11277-018-5360-y>, <https://doi.org/10.1007/s11277-018-5360-y>. (Q4, IF:1.671).
 60. Mosavvar, H., Ghaffari, A., "[Detecting faulty nodes in wireless sensor networks using harmony search algorithm](#)", *Wireless Personal Communications*, 2018. 103(4): p. 2927-2945, <https://doi.org/10.1007/s11277-018-5981-1>. (Q4, 1.671).
 61. Khabiri, M., Ghaffari, A., "[Energy-aware clustering-based routing in wireless sensor networks using cuckoo optimization algorithm](#)", *Wireless Personal Communications*, 2018. 98(3): p. 2473-2495, <https://doi.org/10.1007/s11277-017-4983-8>. (Q4, IF: 1.671).
 62. Ghasemnezhad, S., Ghaffari, A., "[Fuzzy logic based reliable and real-time routing protocol for mobile ad hoc networks](#)", *Wireless Personal Communications*, 2018. 98(1): p. 593-611, <https://doi.org/10.1007/s11277-017-4885-9>. (Q4, 1.671).
 63. Ghaffari, A., Rahmani, A.M., Bannaiean, H.R., "[Localized quality of service routing protocol with service differentiation for wireless sensor networks](#)", *IEICE Electronics Express*, 2011. 8(18): p. 1498-1504, <https://doi.org/10.1587/elex.8.1498>. (Q4, IF:0.578).
 64. Ghaffari, A., Rahmani, A., Khademzadeh, A., "[Energy-efficient and QoS-aware geographic routing protocol for wireless sensor networks](#)", *IEICE Electronics Express*, 2011. 8(8): p. 582-588, <https://doi.org/10.1587/elex.8.582>. (Q4, IF:0.578)
 65. Pakmehr, A., Ghaffari, A., "[Coverage Improving with Energy Efficient in Wireless Sensor Networks](#)", *Journal of Information Systems and Telecommunication (JIST)*, 2017. 5(1): p. 57-65, .
 66. Nikokheslat, H., Ghaffari, A., "[Protocol for controlling congestion in wireless sensor networks](#)", *Wireless Personal Communications*, 2017. 95(3): p. 3233-3251, <https://doi.org/10.1007/s11277-017-3992-y>. (Q4, IF:1.671).
 67. Kamaliniya, A., Ghaffari, A., "[Hybrid task scheduling method for cloud computing by genetic and DE algorithms](#)", *Wireless personal communications*, 2017. 97(4): p. 6301-6323, <https://doi.org/10.1007/s11277-017-4839-2>. (Q4, IF:1.671).
 68. Ghaffari, A., Babaei, M., "[An Algorithm to Enhance Cache Efficiency in Multi-core Processors](#)", *Majlesi Journal of Electrical Engineering*, 2017. 11(2).
 69. Dibaei, M., Ghaffari, A., "[TSIS: a trust-based scheme for increasing security in wireless sensor networks](#)", *Majlesi Journal of Electrical Engineering*, 2017. 11(4): p. 45-52.
 70. Mottaghinia, Z., Ghaffari, A., "[A unicast tree-based data gathering protocol for delay tolerant mobile sensor networks](#)", *Journal of Information Systems and Telecommunication (JIST)*, 2016. 1(13): pp. 59-69, 10.7508/jist.2016.01.008.
 71. Mohsenifard, E., Ghaffari, A., "[Data aggregation tree structure in wireless sensor networks using cuckoo optimization algorithm](#)", *Information Systems & Telecommunication*, 2016. 4(3): p. 182-190.
 72. Khani, M., Ghaffari, A., "[A New Scheme for Detecting and Preventing Gray Hole Attacks in Mobile Ad Hoc Networks](#)", *International Journal of Computer Science and Information Security*, 2016. 14(5): pp. 475-498.
 73. Khangah, N.S., Ghaffari, A., "[Congestion Control in Wireless Sensor Networks](#)

- [Using Genetic Algorithm](#)", *International Journal of Computer Applications Technology and Research* Volume 5, 2016(6): pp. 353-357.
74. Keykhosravi, D., **Ghaffari, A.**, "[A Novel Clustering Method in WSNs by Hybridizing Honey Bee and Learning Automata Methods](#)", *International Journal of Computer Science and Information Security*, 2016. 14(5): p. 331.
 75. Kamalinia, A., **Ghaffari, A.**, "[Hybrid task scheduling method for cloud computing by genetic and PSO algorithms](#)", *Journal of Information Systems and Telecommunication*, 2016. 4, pp. 271-281.
 76. **Ghaffari, A.**, "[Using network coding in wireless sensor networks routing protocol](#)", *Journal of Soft Computing and Information Technology*, 2016. 5(2): p. 12-18.
 77. Mohammadi, R. , **Ghaffari, A.**, "[Optimizing reliability through network coding in wireless multimedia sensor networks](#)", *Indian Journal of Science and Technology*, 2015. 8(9): p. 834, DOI: 10.17485/ijst/2015/v8i9/56039.
 78. Nobahary, S. , **Ghaffari, A.**, "[FDMG: Fault detection method by using genetic algorithm in clustered wireless sensor networks](#)" *Journal of AI and Data Mining*, 2015. 3(1): p. 47-57.
 79. Azari, L. , **Ghaffari, A.**, "[Proposing a novel method based on network-coding for optimizing error recovery in wireless sensor networks](#)", *Indian Journal of Science and Technology*, 2015. 8(9): p. 859-867, DOI: 10.17485/ijst/2015/v8i9/54915.
 80. Amini, E., , **Ghaffari, A.**, "[A New Architecture for Enterprise Resource Planning Systems Based on a Combination of Event-based Software Architecture and Service-oriented Architecture](#)", *Indian Journal of Science and Technology*, 2015. 8(2): p. 108, DOI: 10.17485/ijst/2015/v8i2/57773.
 81. Maleki, I. , **Ghaffari, A.**, Masdari, M., "[A new approach for software cost estimation with hybrid genetic algorithm and ant colony optimization](#)", *International Journal of Innovation and Applied Studies*, 2014. 5(1): p. 72.
 82. **Ghaffari, A.**, "[Designing a wireless sensor network for ocean status notification system](#)", *Indian Journal of Science and Technology*, 2014. 7(6): p. 809.
 83. **Ghaffari, A.**, "[An energy efficient routing protocol for wireless sensor networks using A-star algorithm](#)", *Journal of applied research and technology*, 2014. 12(4): p. 815-822, [https://doi.org/10.1016/S1665-6423\(14\)70097-5](https://doi.org/10.1016/S1665-6423(14)70097-5).
 84. Khanli, L.M., M.E. Far, and A. Ghaffari, [Reliable job scheduler using RFOH in grid computing](#). *Journal of Emerging Trends in Computing and Information Sciences*, 2010. 1(1): p. 43-47.

International & National Conference Papers

1. Shirmarz, A., **Ghaffari, A.**, "Mohammadi, R. and Akleyek, S., 2021, December. DDOS Attack Detection Accuracy Improvement in Software Defined Network (SDN) Using Ensemble Classification", In *2021 International Conference on Information Security and Cryptology (ISCTURKEY)* (pp. 111-115). IEEE.
2. Akşehir, ZD., Akleyek, S., Kılıç, K., Aksaç, C., **Ghaffari, A.**, "A New Hybrid Method for Indoor Positioning" *The International Conference on Artificial Intelligence and Applied Mathematics in Engineering*.
3. Roshanzadeh, M., **Ghaffari, A.**, Saqaeyan, S., "[Using residue number systems for improving QoS and error detection & correction in wireless sensor networks](#)", in *2011 IEEE 3rd International Conference on Communication Software and Networks*. 2011. IEEE. *Data Processing*, Tabriz, Iran, Octobr 2018, (In Persian).
4. Kazem, A.A.P., Beyrami, R.F., **Ghaffari, A.**, "[A new approach for query decomposition and optimization in multi-sink wireless sensor networks](#)", in *Proc. of the 10th IASTED International Conference on Parallel and Distributed Computing and Networks*, 2011.
5. Bagheri, T., **Ghaffari, A.**, S.R. Heikalabad, A.R., "[RCMP: Reliable clustering](#)

- [based multi-path routing algorithm for wireless sensor networks](#)", in *The 5th International Conference on New Trends in Information Science and Service Science*. 2011. IEEE.
6. Bagheri, T., **Ghaffari, A.**, "[Recm: Reliable and energy effective clustering based multi-path routing algorithm for wireless sensor networks](#)", in 2011 World Congress on Information and Communication Technologies. 2011. IEEE.
 7. Hamrahi, Z., **Ghaffari, A.**, Rasi., T., "[MPRGQ: Multi-path routing algorithm to guarantee to achieve the required QoS of wireless sensor networks](#)", in *2010 International Conference on Signal and Image Processing*. 2010. IEEE.
 8. **Ghaffari, A.**, Nematy, F., Rahmani., N., "[Redeployment of cluster heads in wireless sensor networks with genetic algorithm](#)", in *2010 IEEE Fifth International Conference on Bio-Inspired Computing: Theories and Applications (BIC-TA)*. 2010. IEEE.
 9. Babaie, S., **Ghaffari, A.**, "[CCGA: Clustering based on cluster head with genetic algorithm in wireless sensor network](#):", in *2010 International Conference on Computational Intelligence and Communication Networks*, 2010. IEEE.
 10. Babaie, S., **Ghaffari, A.**, "[HCAP: Hamming Code with Additional Parity Method for Error Control in Wireless Sensor Networks](#)", in 2010 International Conference on Intelligent Network and Computing (ICINC 2010), 2010.
 11. Alizadeh, S. , **Ghaffari, A.**, "[An Energy-efficient hierarchical Clustering protocole in wireless sensor networks](#)", in *2010 3rd International Conference on Computer Science and Information Technology*, 2010, IEEE.
 12. **Ghaffari, A.**, Rahmani, A., "[Fault tolerant model for data dissemination in wireless sensor networks](#)", in *2008 International Symposium on Information Technlogy*. 2008. IEEE.
 13. **Ghaffari, A.**, "[Security and threats of Mobile Ad Hoc Networks](#)" *WSEAS Transactions on Communications*, 2006. 5(11).
 14. **Ghaffari, A.**, "[Vulnerability and security of mobile ad hoc networks](#)", in *Proceedings of the 6th WSEAS international conference on simulation, modelling and optimization*. 2006.
 15. **Ghaffari, A.**, "[Connecting mobile ad hoc networks to internet](#)", in *Proceedings of the 4th WSEAS International Conference on Telecommunications and Informatics*, 2005.

Books and Book Chapters

1. Shirmarz, A., **Ghaffari, A.**, "[Advanced topics in computer networks](#)", Islamic Azad University of Tabriz, ISBN:
2. Shiri, A., Ghorbani, H., **Ghaffari, A.**, "[Computer networks \(in Persian\)](#)", Islamic Azad University of Tabriz, ISBN:964-978-10-5673-7, 2010.
3. Aghaei, B., **Ghaffari, A.**, "[Fundamental of computer engineering \(in Persian\)](#)", Islamic Azad University of Malekan, 2015.

ACADEMIC SERVICE (Reviewer)

Reviewer

- Future Generation Computing System (FGCS) (ISI JCR, Elsevier)
- Journal of Supercomputing (ISI JCR, Springer)
- Computer Networks (ISI JCR, Elsevier)
- Ad Hoc Networks (ISI JCR, Elsevier)
- Peer-to-peer networking and application (ISI JCR, Springer)
- Journal of networks and computer applications (ISI JCR, Elsevier)
- Measurement (ISI JCR, Elsevier)

- International journal of communication systems (IJCS) (ISI JCR, Wiley)
- IEEE Access (ISI JCR, IEEE)
- IEEE Transactions on Vehicular Technology (ISI JCR, IEEE)
- IEEE/ACM Transactions on Networking (ISI JCR, IEEE/ACM)
- IEEE Transactions on Industrial Informatics (ISI JCR, IEEE)
- IEEE Transactions on Mobile Computing (ISI JCR, IEEE)
- IEEE Internet of things journal (ISI JCR, IEEE)
- Journal of ambient and humanized computing (ISI JCR, Springer)
- Wireless Networks (ISI JCR, Springer)
- Wireless personal communication (ISI JCR, Springer)
- IET Communication (ISI JCR, IET)
- International journal of communication systems (ISI JCR, John Wiley)

Skills and Expertise

- Windows server
- Structure cabling
- C/ C++, MS Office, ICDL
- Computer networks tools

HONORS & AWARDS

- Best researcher from engineering Faculty, 2010
- Best researcher from engineering Faculty, 2011
- Best researcher from engineering Faculty, 2012
- Best researcher from engineering Faculty, 2018
- Best researcher from university, 2022
- Best Head of Department from University, 2023
- World's Top 1% Scientists List in computer science, according to a conducted study by Clarivate analytics in 2022
- World's Top 2% Scientists List in computer science, according to a conducted study by US-based Stanford University in 2020 and 2021