

In the name of GOD

Dr. Aliakbar Tajari Siahmarzkooh

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Assistant Professor in **Computer Science** (from 2018 - so far)

Department of Computer Sciences, Faculty of Sciences

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Fields of Interest:

Data Mining

Network Security

Theoretical Computer Science

Education:

Ph.D in Computer Science; 2012 - 2017; **University of Tabriz**; Tabriz; Iran

M.Sc in Computer Science; 2010 - 2012; **University of Tabriz**; Tabriz; Iran

B.Sc in Software Engineering; 2005 - 2009; **Ferdowsi University**; Mashhad; Iran

Teaching Experiences:

Data Structure

Python Programming

Data Mining

Artificial Intelligence

Data Base

Publications:

Conference Papers

1. A. Tajari. Siahmarzkooh. "A Hybrid LightGBM and Enhanced Whale Optimization Algorithm for P2P Botnet Detection in Computer Networks". The 1st National Conference on Applied Artificial Intelligence Frontiers. 2026.
2. A. Tajari. Siahmarzkooh. "An Enhanced Cuckoo Search Algorithm with Adaptive Egg Rejection Mechanism for Dynamic Routing in Distributed Networks". The 1st National Conference on Applied Artificial Intelligence Frontiers. 2026.
3. A. Tajari. Siahmarzkooh. "Statistical Analysis of Network Intrusion Detection: A Comparative Study of Machine Learning Methods on Imbalanced Data". The 1st National Conference on Applied Artificial Intelligence Frontiers. 2026.
4. A. Tajari. Siahmarzkooh. "Intrusion Detection in the Internet of Things using Logistic Regression and Gaussian Naive Bayes". 6th International Conference on Soft Computing (CSC2025). 2025.
5. A. Tajari. Siahmarzkooh. "Automatic Malware Detection Using Deep Reinforcement Learning and Artificial Neural Networks". 6th International Conference on Soft Computing (CSC2025). 2025.
6. A. Tajari. Siahmarzkooh. "Combating Botnets Using Support Vector Machines and Fuzzy Clustering Algorithm". 6th International Conference on Soft Computing (CSC2025). 2025.
7. A. Tajari. Siahmarzkooh, M. Miri. "A Combined Solution of Machine Learning Methods to Improve Botnet Detection". 3rd National Conference on Soft Computing and Cognitive Science. 2024.
8. A. Tajari. Siahmarzkooh, M. Miri. "Intrusion Detection Using the Combination of Two Meta-Heuristic Algorithms Including Intelligent Water Drops and Particle Swarm Optimization". 3rd National Conference on Soft Computing and Cognitive Science. 2024.
9. A. Tajari. Siahmarzkooh, M. Miri. "Securing the Internet of Things Using Gradient XGBoost and Bagging". 3rd National Conference on Soft Computing and Cognitive Science. 2024.
10. A. Tajari. Siahmarzkooh. "Cloud penetration detection system using fuzzy logic and k-means clustering". Second national conference of soft computing and cognitive sciences. 2023.
11. A. Tajari. Siahmarzkooh. "Phishing website detection system using data mining methods and fuzzy logic". Second national conference of soft computing and cognitive sciences. 2023.
12. A. Tajari. Siahmarzkooh. "Detection of HTTP flood attack in application layer using clustering and machine learning criteria". Second national conference of soft computing and cognitive sciences. 2023.

13. A. Tajari. Siahmarzkooh. "Combination of k-means clustering and meta-heuristic algorithm of gray wolves to increase the prediction accuracy of type 2 diabetes". Fourth International Conference on Soft Computing. 2021
14. A. Tajari. Siahmarzkooh. "An Efficient Attack Detection Approach Based on a Proper Feature Selection Strategy". 1st national conference of innovation new and applied technologies in electrical computer engineering. 2021.
15. A. Tajari. Siahmarzkooh. "A Combined Data Mining Algorithm for Load Balancing in Cloud Networks". 1st national conference of innovation new and applied technologies in electrical computer engineering. 2021.
16. A. Tajari. Siahmarzkooh. "An Improved ICA-based Load Balancing System using PSO". 5th National Conference on Application of Novel Technologies in Engineering Sciences. 2021.
17. A. Tajari. Siahmarzkooh. "Network intrusion prediction using adaptive fuzzy neural network in Internet of Things". The first national conference of intelligent systems and fast computing. 2021.
18. A. Tajari. Siahmarzkooh. "Effective detection of cyber-attacks using learning neural network". The first national conference of intelligent systems and fast computing. 2021.
19. A. Tajari. Siahmarzkooh. "Under-water Wireless Sensor Networks Routing using Clustering and Imperialist Competitive Algorithm". 1st National Conference on Soft Computing and Cognitive Science. 2020.
20. A. Tajari. Siahmarzkooh. "A hybrid approach based on genetic and imperialist competitive algorithm for task scheduling in cloud networks". 1st National Conference on Soft Computing and Cognitive Science. 2020.

Journal Papers

1. A. Tajari. Siahmarzkooh. "An Augmented Artificial Bee Colony Algorithm with Adaptive Neighborhood Search for Solving Systems of Differential Equations". Computational Methods for Differential Equations. 2026 (In Press).
2. A. Tajari. Siahmarzkooh. "A Stochastic Differential Equation Framework for Modeling Advanced Persistent Threats in Computer Networks". Uzbek Mathematical Journal. 2026 (In Press).
3. A. Tajari. Siahmarzkooh. "A Triple Hybrid Framework Combining Neural ODEs, Thermodynamic Search Algorithm, and Adaptive Step Size Control for Solving Differential Equations". Analytical and Numerical Solutions for Nonlinear Equations (ANSNE). 2026 (In Press).
4. A. Tajari. Siahmarzkooh. "A Fractional-Order Stochastic Differential Model for APT Lateral Movement with Memory Effects and Non-Local Dynamics". Sahand Communications in Mathematical Analysis. 2026 (In Press).

5. A. Tajari. Siahmarzkooh. "A Stochastic Operational Risk Model for Banking Networks Using Hawkes Processes and Markov Switching". *Journal of Mathematics and Modeling in Finance*. 2026.
6. A. Tajari. Siahmarzkooh. "A Multi-Layer SEIRS-V Network Epidemic Model for IoT Malware Propagation with Heterogeneous Device Types and Patch Dynamics". *Iranian Journal of Numerical Analysis and Optimization*. 2026.
7. A. Tajari. Siahmarzkooh. "A Multi-Layer Graph-Theoretic Model for Detecting Anomalous Communication Patterns in IoT Networks". *Analytical and Numerical Solutions for Nonlinear Equations (ANSNE)*. 2026.
8. A. Tajari. Siahmarzkooh. "A Novel Hybrid Intrusion Detection Framework for IoT Networks Using Mother-Infant Communication Metaheuristic and Attention-Based Deep Learning". *Computational Algorithms and Numerical Dimensions*. 2026.
9. A. Tajari. Siahmarzkooh. "Code Smell Detection Using a Hybrid LSTM-CNN Deep Learning Approach with Optimized Software Metrics". *National Academy Science Letters*. 2026.
10. A. Tajari. Siahmarzkooh. "A Novel Hybrid Slime Mould Algorithm and Particle Swarm Optimization for Inverse Heat Conduction Problems". *Computational Sciences and Engineering*. 2026.
11. A. Tajari. Siahmarzkooh. "A Hybrid Grey Wolf Optimizer and Cuckoo Search Algorithm for Solving Inverse Partial Differential Equations". *Computational Sciences and Engineering*. 2026.
12. A. Tajari. Siahmarzkooh, A. Rahimi. Hosseinabad. "Malware Detection in Android Operating System using Convolutional Neural Network and Long Short-Term Memory Network". *Modeling in Engineering*. 2025.
13. A. Tajari. Siahmarzkooh. "Malware Detection Based on Firefly Meta-Heuristic Algorithm and Long-Short-Term Memory Learning Network". *Electronic and Cyber Defense*. 2025.
14. A. Tajari. Siahmarzkooh. "Internet of Things Secure System Using Dragonfly Algorithm for Feature Selection and Gradient Boosting for Classification". *Advanced Defense Science and Technology*. 2025.
15. A. Tajari. Siahmarzkooh. "Smart Home Intrusion Detection Model based on Principal Component Analysis and Random Forest Classification". *Electronic and Cyber Defense*. 2024.
16. A. Tajari. Siahmarzkooh. "An Improved K-Means Clustering Feature Selection and Biogeography Based Optimization for Intrusion Detection". *International Journal of Web Research*. 2023.
17. A. Tajari. Siahmarzkooh. "Reducing the False Alarm Rates in Detecting Botnets Using the Combination of K-Nearest Neighbors and Stochastic Gradient Descent Algorithms". *Karafan*. 2023.
18. A. Tajari. Siahmarzkooh. "Using Deep Learning Features to Improve Intrusion Detection in the Internet of Things Environment". *Journal of Information and Communication Technology in Policing*. 2023.
19. A. Tajari. Siahmarzkooh. "Intrusion Detection in Computer Networks Using Decision Tree and Feature Reduction". *Electronic and Cyber Defense*. 2022.

20. A. Tajari. Siahmarzkooh. "Type 2 Diabetes Prediction using Gray Wolf Optimization Algorithm". Indian Journal of Forensic Medicine and Toxicology. 2021.
21. A. Tajari. Siahmarzkooh. "ACO-based Type 2 Diabetes Detection using Artificial Neural Networks". Indian Journal of Forensic Medicine and Toxicology. 2021.
22. A. Tajari. Siahmarzkooh, M. Alimardani. "A Novel Anomaly-based Intrusion Detection System using Whale Optimization Algorithm WOA-Based Intrusion Detection System". International Journal of Web Research. 2020.
23. A. Tajari. Siahmarzkooh. "Intrusion Detection with Low False Alarms using Decision Tree-based SVM Classifier". International Journal of Web Research. 2020.
24. J. Karimpour, S. Lotfi. A. Tajari. Siahmarzkooh. "Intrusion detection in network flows based on an optimized clustering criterion". Turkish Journal of Electrical Engineering and Computer Sciences. 2017.
25. A. Tajari. Siahmarzkooh, J. Karimpour, S. Lotfi. "A Cluster-based Approach Towards Detecting and Modeling Network Dictionary Attacks". Engineering, Technology Applied Science Research. 2016.

Books

1. A. Tajari Siahmarzkooh. "Data Structure in Python". Golestan University Press. 2026.
2. A. Tajari Siahmarzkooh, M. Rajabi, H. Ahmadi. "Introductory Programming with Python". Golestan University Press. 2024.
3. A. Tajari Siahmarzkooh, M. Rajabi. "Advanced Programming with Python". Arshadan Institute Press. Golestan University. 2024.
4. A. Tajari Siahmarzkooh, M. Bayat. "Kali Linux revealed; mastering the penetration testing distribution". Translated. Golestan University Press. 2023.