Alaa Allakany
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Academic Qualifications

- Post-Doc, Cybersecurity Center, Kyushu University, Japan (2017 - 2022)
- PhD, Information Science and Electrical Engineering, Kyushu University (2014 - 2017)
- Master of Computer Science, South Valley University, Egypt (2006 - 2010)
- B.Sc., Computer Science, South Valley University, Egypt (2000 - 2004)

Academic Positions and Experiences

- Visiting Professor, Cybersecurity Center, Kyushu University (2025 - Present)
- Associate Professor, Computer Science, Kafrelsheikh University (2024 - Present)
- Assistant Professor, Computer Science, Kafrelsheikh University (2017 - 2024)
- Research Fellow, Cybersecurity Center, Kyushu University (2017 - 2022)
- Ph.D. Student/Researcher, Kyushu University (2013 - 2017)
- Assistant Lecturer, Mathematics Department, Kafrelsheikh University (2010 – 2013)
- Demonstrator, Computer Science, South Valley University (2006 – 2010)

Leadership & Additional Positions

- Director, International Ranking Unit – Kafrelsheikh University (2022 - 2023)
- Senior Employer Relations Officer, UCCD – Kafrelsheikh University (2022 - 2025)
- Member, JST-DST SICORP IoT Security Project with IITD, India (2017 – 2021)

Research Interests

- Cybersecurity with a focus on Zero Trust architectures in cloud computing environments, authentication systems, vulnerability assessment, IoT security, machine learning, algorithms, heuristic algorithms.

Activities & Recognition

- Chaired sessions on IoT/Cybersecurity in international conferences (2018–2020)
- Supervised theses at Kyushu and Kafrelsheikh Universities
- Reviewer: Sensors (2023), Applied Sciences (2023), IEEE Access (2022)

Certifications & Training

- Career Development Facilitator (CDF) Parts 1 & 2, AUC
- Certified Professional Trainer (CPT), American Champ, Egypt
- Effective Presentation Skills

Courses Taught

- Advanced Cybersecurity Threat Intelligence, Network Security and Cryptography, Ethical Hacking and Penetration Testing, Cybersecurity Risk Assessment and Management, Digital Forensics and Incident Response, IoT Security Essentials, Malware Analysis and Reverse Engineering, Cloud Security Fundamentals, Algorithms and Data Structures, Distributed Systems and Cloud Computing, Database Management Systems, Operating Systems and Kernel Programming, Machine Learning and Data Mining, and Network Design and Analysis.

Selected Publications

1. Allakany, A., Alsedias, N. & Aly, A.M. Artificial neural network with incompressible smoothed particle hydrodynamics for exothermic chemical reaction on heat and mass transfer in a rectangular annulus. Sci Rep 15, 3889 (2025). https://doi.org/10.1038/s41598-024-64821-y
2. A. Allakany, and S. A. Nooh; Cost-Efficient Method for Detecting and Mitigating the CrossPath Attack via Shared Links in SDN-Based IoT Network; Information Sciences Letters 2024,13,497-509.
3. Allakany, A.; Saber, A.; Mostafa, S.M.; Alsabaan, M.; Ibrahem, M.I.; Elwahsh, H. Enhancing Security in ZigBee Wireless Sensor Networks: A New Approach and Mutual Authentication Scheme for D2D Communication. Sensors 2023, 23, 5703. https://doi.org/10.3390/s23125703
4. Janjhyam Venkata Naga Ramesh, T Abirami, T Gopalakrishnan, Kanagaraj Narayanasamy, Mohamad Khairi Ishak, Faten Khalid Karim, Samih M Mostafa, Alaa Allakany: Sparrow Search Algorithm With Stacked Deep Learning Based Medical Image Analysis for Pancreatic Cancer Detection and Classification, IEEE Acess, 2023, 11, 111927 – 111935. https://doi.org/10.1109/ACCESS.2023.3322376.
5. Elwahsh, H.; Allakany, A.; Alsabaan, M.; Ibrahem, M.I.; El-Shafeiy, E. A Deep Learning Technique to Improve Road Maintenance Systems Based on Climate Change. Appl. Sci. 2023, 13, 8899. https://doi.org/10.3390/app13158899.
6. Saber, A., Hussien, A.G., Awad, W.A., and Allakany, A. l. “Adapting the pre-trained convolutional neural networks to improve the anomaly detection and classification in mammographic images”. Sci Rep 13, 14877 (2023). https://doi.org/10.1038/s41598-023-41633-0
7. Alaa Allakany, Geeta Yadav, Kolin Paul, and Koji Okamura, Detection and Mitigation of LFA Attack in SDN-IoT Network, Proceedings of of the 34th International Conference on Advanced Information Networking and Applications (AINA-2020), 2020.04. (peer review).
8. Yiyi Wang, Alaa Mohammed, Srishti Kulshrestha, and Koji Okamura, Automatically Generate E-Learning Quizzes from IoT Security Ontology. Conference: 2019 8th International Congress on Advanced Applied Informatics (IIAI-AAI) July 2019. (peer review)
9. Geeta Yadav, Alaa Allakany, Vijay Kumar, Kolin Paul and Koji Okamura, IoT-PEN: A Penetration Testing Framework for IoT, Proceedings of The 34th International Conference on Information Networking (ICOIN 2020) , 2020.01. (peer review).
10. Geeta Yadav, Alaa Allakany, Vijay Kumar, Kolin Paul and Koji Okamura, Penetration Testing Framwork for IoT, Proceedings of 8th International Congress on Advanced Applied Informatics, 2019.07. (peer review)
11. Alaa Allakany, Toshihide Muto, Koji Okamura, Srishti Kulshrestha and Ranjan Bose, Systematic building of E-Learning contents for secure IoT, The 12th International Workshop on Information Search, Integration, and Personalization (ISIP2019), 2018.04.
12. Alaa Allakany and Koji Okamura, Distributed GA for Popularity Based Partial Cache Management in ICN, Proceedings of the 9th International Conference on Future Internet Technologies, ser. CFI ’14. New York, NY, USA: ACM, 201.
13. Alaa M. Allakany and Koji Okamura. 2017. Latency Monitoring in Software-Defined Networks. In Proceedings of the 12th International Conference on Future Internet Technologies (CFI'17). Association for Computing Machinery, New York, NY, USA, Article 5, 1–4. https://doi.org/10.1145/3095786.3095791.
14. Allakany, Alaa M., and Koji Okamura. Efficient Multicasting Algorithm Using SDN. International Journal of Computer Science and Network Security (IJCSNS) 17.4 (2017): 292.