

Journal Publications

- [J1] Sharawi, M., Althekair, A., Odeh, M., AlBayaa, M., Abu Doush, I., & Almulla, M. (2026). "MGaming EEG-BCI: Advancing inclusive and gesture-free neural interaction for mobile gaming applications." *Journal of Sensors*, 2026, Article 9983391, 15 pages. <https://doi.org/10.1155/js/9983391>
- [J2] Alrashdi, I., Sharawi, M., Ali, A. M., Sallam, K. M., Arain, B., & Abdel-Basset, M. (2026). "Utilizing deep learning models for early detection and classification of fruit diseases: Towards sustainable agriculture and enhanced food quality." *Scientific Reports*. <https://doi.org/10.1038/s41598-026-38259-3>
- [J3] Vasquez-Ramos, J., Ruiz-Sandoval, M. G., Oliva, D., Ramos-Soto, O., Ramos-Frutos, J., Sharawi, M., & Pérez-Cisneros, M. (2025). "Response surface-driven hyperparameter optimization for XGBoost." *The Journal of Supercomputing*, 81, Article 1112. <https://doi.org/10.1007/s11227-025-07600-4>
- [J4] Miguel-Andrés, I., Ramos-Frutos, J., Sharawi, M., Oliva, D., Reyes-Dávila, E., Casas-Ordaz, A., Pérez-Cisneros, M., & Zapotecas-Martínez, S. (2024). "Wrapper-based feature selection to classify flatfoot disease." *IEEE Access*, 12, 22433–22447. <https://doi.org/10.1109/ACCESS.2024.3361936>
- [J5] Mohamed, M., Elsayed, A., & Sharawi, M. (2024). "Modeling metaverse perceptions for bolstering traffic safety using novel TrSS-based OWCM-RAM MCDM techniques." *Neutrosophic Systems with Applications*, 16. <https://doi.org/10.61356/j.nswa.2024.16204>
- [J6] Mohamed, M., Elsayed, A., & Sharawi, M. (2024). "ICT innovative for adapting and mitigating climatic variability: Towards an integrated approaches for sustainable environment." *Climate Change Reports*, 1, 48–60. <https://doi.org/10.61356/j.ccr.2024.1211>
- [J7] Abdel-Basset, M., Mohamed, R., Abdel-Fatah, L., Sharawi, M., & Sallam, K. M. (2023). "Improved metaheuristic algorithms for optimal parameters selection of proton exchange membrane fuel cells: A comparative study." *IEEE Access*, 11, 7369–7397. <https://doi.org/10.1109/ACCESS.2023.3236023>
- [J8] Abdel-Basset, M., Mohamed, R., Abd Elkhaliq, W., Sharawi, M., & Sallam, K. M. (2022). "Task scheduling approach in cloud computing environment using hybrid differential evolution." *Mathematics*, 10(21), Article 4049. <https://doi.org/10.3390/math10214049>
- [J9] Abdel-Basset, M., Mohamed, R., Sharawi, M., Abdel-Fatah, L., Abouhawwash, M., & Sallam, K. (2022). "A comparative study of optimization algorithms for parameter estimation of PV solar cells and modules: Analysis and case studies." *Energy Reports*, 8, 13047–13065. <https://doi.org/10.1016/j.egyr.2022.09.040>

[J10] Emary, E., Zawbaa, H. M., & Sharawi, M. (2019). “Impact of Lévy flight on modern metaheuristic optimizers.” *Applied Soft Computing*, 75, 775–789. <https://doi.org/10.1016/j.asoc.2018.11.033>

[J11] Sharawi, M., Emary, E., Saroit, I. A., & El-Mahdy, H. (2014). “Flower pollination optimization algorithm for wireless sensor network lifetime global optimization.” *International Journal of Soft Computing and Engineering*, 4(3), 54–59.

[J12] Sharawi, M., Emary, E., Saroit, I. A., & El-Mahdy, H. (2014). “Bat swarm algorithm for wireless sensor networks lifetime optimization.” *International Journal of Science and Research*, 3(5), 654–664.

[J13] Sharawi, M., Saroit, I. A., El-Mahdy, H., & Emary, E. (2013). “Routing wireless sensor networks based on soft computing paradigms: Survey.” *International Journal on Soft Computing, Artificial Intelligence and Applications*, 2(4), 21–36.

Conference proceedings

[C1] Almulla, M., Abdou, S., AlNowaif, H., AlSanea, J., & Sharawi, M. (2026). “An intelligent holographic virtual assistant for human-computer interaction in academic environments.” *Proceedings of the 17th Student Research Conference on Applied Computing*, 1–6. IEEE. <https://doi.org/10.1109/SRC70627.2026.11550519>

[C2] Sharawi, M., Shady, R., Salahi, P., & Almulla, M. (2026). “Virtual explorations with Wolfpack: An accessible VR e-book for enhancing active learning in STEM education.” *Proceedings of the IEEE Global Engineering Education Conference (EDUCON 2026)*.

[C3] Sharawi, M., Al-Obaid, A., Almulla, M., & Rezkalla, N. (2025). “Kyber-MSMT-PF: An intelligent hybrid cryptosystem for post-quantum security.” *International Conference on Computer and Applications*, 1–7. <https://doi.org/10.1109/ICCA66035.2025.11430742>

[C4] Sultan, K., Marey, O. I., Khanafer, M., Sharawi, M., & Rababaah, A. R. (2025). “Formal trust-based security approach for uncertain IoT-cloud systems.” *5th International Conference on Electrical, Computer and Energy Technologies*, 1–7. <https://doi.org/10.1109/ICECET63943.2025.11471893>

[C5] Sharawi, M., & Almulla, M. (2024). “Multi-staged matrix transformations Playfair cipher (MSMT-PF).” *Proceedings of the International Conference on Computer and Applications*, 1–7. <https://doi.org/10.1109/ICCA62237.2024.10928123>

[C6] Althekair, A., Odeh, M., AlBayaa, M., Sharawi, M., & Doush, I. A. (2023). “Mobile gaming EMG-based brain computer interface.” In H. P. da Silva & P. Cipresso (Eds.), *Proceedings of the 7th International Conference on Computer-Human Interaction Research and Applications*, CCIS Vol. 1996, 40–52. Springer. https://doi.org/10.1007/978-3-031-49425-3_3

[C7] Sharawi, M., & El-Abd, M. (2017). “A cooperative co-evolutionary LSHADE algorithm for large-scale global optimization.” *Proceedings of the IEEE Symposium Series on Computational Intelligence*, 777–784. <https://doi.org/10.1109/SSCI.2017.8280863>

[C8] Sharawi, M., & Emary, E. (2017). “Impact of grey wolf optimization on WSN cluster formation and lifetime expansion.” *Proceedings of the 9th International Conference on Advanced Computational Intelligence*, 157–162. IEEE. <https://doi.org/10.1109/ICACI.2017.7974501>

[C9] Sharawi, M., Zawbaa, H. M., & Emary, E. (2017). “Feature selection approach based on whale optimization algorithm.” *Proceedings of the International Conference on Advanced Computational Intelligence*, 163–168. <https://doi.org/10.1109/ICACI.2017.7974502>

[C10] Zawbaa, H. M., Emary, E., Parv, B., & Sharawi, M. (2016). “Feature selection approach based on moth-flame optimization algorithm.” *Proceedings of the IEEE Congress on Evolutionary Computation*, 4612–4617. <https://doi.org/10.1109/CEC.2016.7744378>

[C11] Sharawi, M., Emary, E., Saroit, I., & El-Mahdy, H. (2015). “WSNs energy-aware coverage-preserving optimization model based on multi-objective bat algorithm.” *Proceedings of the IEEE Congress on Evolutionary Computation*, 472–479. <https://doi.org/10.1109/CEC.2015.7256918>

[C12] Sharawi, M., Fouad, A., & Zeid, A. (2013). “Towards effective integration of virtual learning environments and blended learning.” *Proceedings of the First AOU International Conference on Open Learning: Role, Challenges, and Aspirations*, Kuwait.

[C13] Sharawi, M., Sammany, M., El-Beltagy, M., & Saroit, I. (2008). “Optimizing neural network architecture using Tikhonov regularization parameter for intrusion detection systems and classification of attacks.” *Proceedings of the International Conference on Information and Knowledge Engineering*, Las Vegas, USA.

[C14] Sammany, M., Sharawi, M., El-Beltagy, M., & Saroit, I. (2007). “Artificial neural networks architecture for intrusion detection systems and classification of attacks.” *Proceedings of the Fifth International Conference on Informatics and Systems*, 367–372.

Book chapters

[B1] Sharawi, M., & Almulla, M. (2026). “Moth-flame optimization.” In A. J. Kulkarni, E. Mezura-Montes, & H. Bonakdari (Eds.), *Encyclopedia of Engineering Optimization and Heuristics*. Springer. https://doi.org/10.1007/978-981-96-8165-5_85-1

[B2] Sharawi, M., & El-Abd, M. (2021). “Brainstorm optimization algorithm.” In A. J. Kulkarni & P. Siarry (Eds.), *Handbook of AI-Based Metaheuristics* (pp. 1–18). CRC Press. <https://doi.org/10.1201/9781003162841-2>

[B3] Sharawi, M., & Emary, E. (2016). "Clustering optimization for WSN based on nature-inspired algorithms." In *Nature-Inspired Computation in Engineering* (pp. 111–132). Springer. https://doi.org/10.1007/978-3-319-27214-6_6

Poster presentations

[P1] Almulla, M., Abdou, S., AlNowaif, H., AlSanea, J., & Sharawi, M. (2026). "An intelligent holographic virtual assistant for human-computer interaction in academic environments." Poster presented at IEEE EDUCON, Egypt.

[P2] Alnajim, A., Alobaid, A., Elbyah, M., Rezkalla, N., & Sharawi, M. (2026). "Learning by escaping: An adaptive AI-driven STEM escape room for experiential first-year computer science education." Poster presented at the Student Research Conference on Applied Computing, Abu Dhabi, UAE.

[P3] Alsaad, Y., Alajmi, S., & Sharawi, M. (2024). "AUK admission enquiry chatbot." Poster presented at the Annual Undergraduate Research Conference on Applied Computing, Dubai, UAE.

[P4] Fahim, P., Elnaby, O. A., & Sharawi, M. (2017). "Last Stand: Virtual reality game." Poster presented at the Annual Undergraduate Research Conference on Applied Computing, Dubai, UAE.

[P5] Yasser, A., Nidal, F., & Sharawi, M. (2017). "Galactic Maneuvers: iOS and Android mobile game." Poster presented at the Annual Undergraduate Research Conference on Applied Computing, Dubai, UAE.