ZAKARIA NOOR ALDEEN MAHMOOD ALQATTAN

PhD Computer Sciences

PROFILE

Have B. Computer Sciences, M.Sc. intelligent System and Ph.D. in Evolutionary Computing

Lecturer

CONTACT

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GOOGLE SCHOLAR:
https://scholar.google.com/citations?user=yKM3f9wAAAAJ&hl=ar

EDUCATION

PhD at School of Computer Sciences, Universiti Sains Malaysia
2011 - 2017
Thesis was nominated for "best thesis award"

MSc at School of Arts and Sciences, Universiti Utara Malaysia
2009 - 2011
Thesis was published in the university library as a first thesis in Bioinformatics filed of university history.

B. Computer Sciences at College of Computer Sciences and Mathematics, University of Mosul-Iraq
2003 - 2007

WORK EXPERIENCE

Northern technical University, Department of Cyber Security and Cloud Computing Techniques Engineering, Assistant Dean for Scientific and Student Affairs
Iraq
August 2024 – present

Northern technical University, Department of Cyber Security and Cloud Computing Techniques Engineering, Lecturer
Iraq
February 2023 – present
Teaching Introduction to Programing, OOP, Linux administration, writing research papers, performing workshops and seminars for faculty members.

Nineveh University, Faculty of Information Technology (IT), software department, visitor lecture.
Iraq
March 2022 – January 2023
Teaching data Structure in python, files processing.

Universiti Sains Malaysia, National Advance IPv6 Center, Teaching Fellow
Malaysia
January 2018 – December 2019
Teaching Internet Governance, Internet of Things for postgraduate master's degree student; Supervisor Assistant for 4 PhD students and 1 master student.

Universiti Sains Malaysia, School of Computer Sciences, Graduate Research Assistant
Malaysia
Jan 2016 – Jun 2016
Research, Experimental Tests, Evaluation and Writing Research Reports for the project" MEMBRANE COMPUTING BASED MODELS FOR IMAGE ANALYSIS (1001/PKOMP/811290)".

Universiti Sains Malaysia, School of Computer Sciences, Graduate Research Assistant
Malaysia
Jan 2015 – Jun 2015

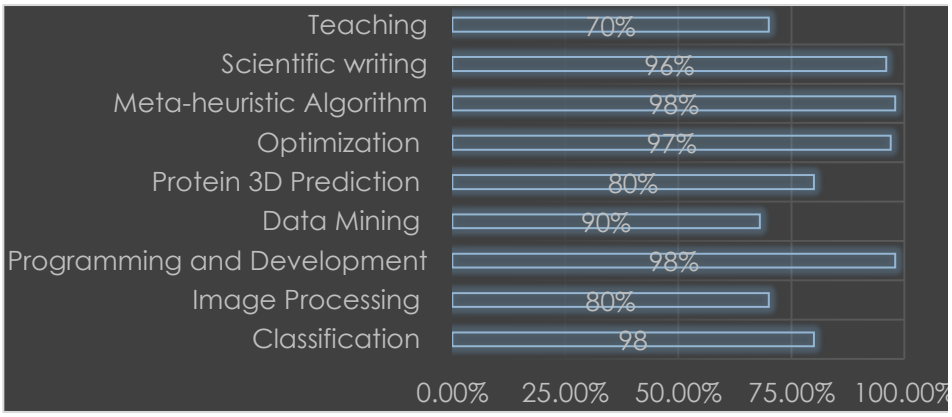
Research, Experimental Tests, Evaluation and Publishing papers for project: "Protein 3D Structure Prediction Using Hybrid Artificial Bee Colony Algorithm."

Universiti Sains Malaysia, School of Computer Sciences, Graduate Research Assistant
Malaysia
Jan 2014 – May 2014
Sep 2014 – Nov 2014
Research, Experimental Tests, Evaluation and Writing Research Papers for:
"BIO-INSPIRED OPTIMIZATION METHOD FOR FEATURE SELECTION OF MASS SPECTOMETERY ANALYSIS IN BIOMARKER IDENTIFICATION OF OVARIAN CANCER (203/PKOMP/6711268)".

Universiti Utara Malaysia, School of Computing, Research Assistant
Malaysia
Nov 2012 – Feb 2013
Research, Experimental Tests and Evaluation for:
Manpower Planning Optimization Using Artificial Bee Colony Algorithm.
A Swarm Intelligence Algorithm to Price Options.
Optimization Algorithm for Data Grids.

Universiti Utara Malaysia, School of Computing, Research Assistant
Malaysia
Nov 2010 – Feb 2011
Developing Analysis Applications, Writing Reports for Research Purposes.

SKILLS



PUBLICATIONS

M.Sc. Thesis title and abstract: http://etd.uum.edu.my/2312/
ANGLE BASED PROTEIN TERTIARY STRUCTURE PREDICTION USING BEES OPTIMIZATION ALGORITHM

1. Alzakwani, M. H. H., Najeeb, S. M. M., Jubair, M. A., Alqattan, Z. N., & Ali, R. R. (2025). Delay tolerant data forwarding topology aware routing protocol for multi-UAVs empowered VANETs. International Journal of Innovative Research and Scientific Studies, 8(1), 2438-2446.
2. Jarrah, M., Abu-Khadrah, A., Alrababah, H., Jaya, A. S. B. M., & Alqattan, Z. N. (2024). RETRACTED: Affirmative data analytics based data processing method for 6G wireless network applications. Transactions on Emerging Telecommunications Technologies, 35(10), e4583.
3. Jarrah, M., Alqattan, Z. N., Jaya, A. S. M., Makhadmeh, S. N., Abu-Khadrah, A. I., Aljarrah, I., & Alomari, O. A. (2024). Improving CNTs properties using computational intelligence algorithms. *International Journal of Materials and Product Technology*, *68*(1/2), 169-198.
4. Abu-Khadrah, A., Jarrah, M., Alrababah, H., Alqattan, Z. N., & Akbar, H. (2022). Pervasive computing of adaptable recommendation system for head-up display in smart transportation. *Computers and Electrical Engineering*, *102*, 108204.
5. Jarrah, M., Abu-Khadrah, A., Alrababah, H., Jaya, A. S. B. M., & Alqattan, Z. N. (2022). Affirmative data analytics based data processing method for 6G wireless network applications. *Transactions on Emerging Telecommunications Technologies*, e4583.
6. Taief A. Hamdi, Anbar, M., Alqattan Z. N., Alzubi, Q. (2019). Anomaly-Based Intrusion Detection System using Multi-Objective Grey Wolf Optimization Algorithm. Journal of Ambient Intelligence And Humanized Computing. (ISI/Q1/Impact 1.910).

7. M.I.M Jarrah, ASM Jaya, Zakaria N. Alqattan. Mohd Asyadi Azam, Hazim Jarrah, Rosni Abdullah (2020). A Novel Explanatory Hybrid Artificial Bee Colony Algorithm for Numerical Functions Optimization. Journal of Supercomputing. (ISI/Q3/Impact 1.326).

8. Mohammed Al-Shalabi, Mohammed Anbar, Tat-Chee Wan, & Alqattan Z. N. (2019). Energy Efficient Multi-hop Path in Wireless Sensor Networks Using Enhanced Genetic Algorithm. Information Sciences journal. (SCOPUS/ISI/Q1/Impact Factor 5.1).

9. Alzubi, Q., Anbar, M., Alqattan Z. N., Al-Betar, M., & Abdullah R. (2019). Intrusion Detection System (IDS) based on a Modified Binary Grey Wolf Optimization (MBGWO). Neural Computing and Applications Journal. (SCOPUS/ISI/Q1/Impact Factor 4.664).

10. Alqattan, Z. N., & Abdullah, R. (2017). Neural Network Training Using Hybrid Particle-move Artificial Bee Colony Algorithm. Journal of ICT, 16, No. 2 (Dec) 2017, pp: 314–334. (SCOPUS/EBSCOhost/MyCite/ASEAN/DOAJ)][Q2].

11. Alqattan, Z. N., & Abdullah, R. (2015). A hybrid artificial bee colony algorithm for numerical function optimization. International Journal of Modern Physics C, 26(10), 1550109. (SCOPUS/ISI/Q3/ Impact Factor 1.195 in 2015).

12. Ahmed Husham, Selvakumar M. S., Zakaria N. M. Alqattan (2019). Threats Against Information Privacy and Security in Social Networks: A Review. First International Conference on Advances in CyberSecurity 2019, Springer. (SCOPUS)

13. Jarrah M.I.M., Jaya A.S.M., Azam M.A., Alqattan Z.N., Muhamad M.R., Abdullah R. (2019) Application of Bat Algorithm in Carbon Nanotubes Growing Process Parameters Optimization. In: Piuri V., Balas V., Borah S., Syed Ahmad S. (eds) Intelligent and Interactive Computing. Lecture Notes in Networks and Systems, vol 67. Springer, Singapore. [SCOPUS].

14. Alqattan, Z. N., & Abdullah, R. (2013). Artificial Bee Colony Optimization Algorithm with Crossover Operator for Protein Structure Prediction *Soft Computing Applications and Intelligent Systems* (pp. 147-157): Springer. (SCOPUS)

15. Alqattan, Z. N., & Abdullah, R. (2013, November). A comparison between artificial bee colony and particle swarm optimization algorithms for protein structure prediction problem. In International Conference on Neural Information Processing (pp. 331-340). Springer, Berlin, Heidelberg. (SCOPUS).

16. MAHMOOD, Z. N., et al. (2012). PROTEIN TERTIARY STRUCTURE PREDICTION BASED ON MAIN CHAIN ANGLE USING A HYBRID BEES COLONY OPTIMIZATION ALGORITHM. International Journal of Modern Physics: Conference Series, 09, 143-156.

AWARDS AND ACHIEVEMENTS

1. PhD thesis was nominated for "Best Thesis Award", 2017.
2. Achievement: Bronze Medal at Malaysia International Invention & Innovation Expo 17-19 February 2011.

RESEARCH ACTIVITIES

1. Protein 3D structure Prediction using Met-heuristic Search Algorithms
2. Intrusion Detection System (IDS) Enhancement using swarm-based search algorithms.
3. Food Image Segmentation Using an Improved Active Contour Model
4. Drowsiness Detection Using Deep Learning Methods.

TEACHING COMPETENCIES

1. Internet Governance
2. Internet of Things
3. Data Communication and Network
4. Mathematical Methods for Computer Science
5. Programing in C++.
6. Linux administration.

PROFESSIONAL QUALIFICATIONS

1. Organizing Committee Member of International Conference on Advances in Cyber Security (ACeS 2019).

2. Provided Research Assistance & Co Supervision to NA v6 Postgraduate Students.
3. Research Team Member in OTMP-UMobile Smart Transportation Project.
4. Reviewer in "Information Sciences"
5. Reviewer in "American Journal of Artificial Intelligence"
6. Reviewer in "IEEE Access"
7. Article Reviewer for INTERNATIONAL CONFERENCE ON INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FOR TRANSFORMATION (IC-ICT4T 2018)
8. Research paper Presenter at ICMB conference in Renaissance Melaka Hotel Malaysia 12-14 April 2011.
9. Research paper Presenter at Computer Science Postgraduate Colloquium 2012 (CSPC 2012), USM, Penang, Malaysia.
10. Research Review Presenter at Computer Science Postgraduate Colloquium 2013 (CSPC 2013), USM, Penang, Malaysia.
11. Participate as Jury at the 4th International Innovation, Design and Articulation (i-IDeATM 2018) held on 24th - 26th April 2018 at Universiti Teknologi MARA Perlis Branch, Malaysia.
12. Participate as Jury at the Innovative Research, Invention and Application Exhibition 2018 (I-RIA 2018) held on 6th - 7th May 2018 at Universiti Utara Malaysia, Malaysia.
13. Attended number of Conferences and Workshops organized by Universiti Utara Malaysia's administration from (2009-2010) and by Universiti Sains Malaysia's administration from (2011-2018).

SUPERVISED AND CO-SUPERVISED RESEARCH (POSTGRADUATE STUDENTS)

1. Hybridizing an Improved Flower Pollination Algorithm with Profile Technique and Genetic Algorithm for Multiple Sequence Alignment.
2. Multi-objectivization Evolutionary Approach for Ab Initio Structure Protein Prediction.
3. Hybridizing Binary Grey Wolf Optimization with Particles Swarm Optimization Based Intrusion Detection System.
4. Energy Efficient Multi-hop Path in Wireless Sensor Networks Using Enhanced Genetic Algorithm.
5. Enhanced Grey Wolf Algorithm As Feature Selection Mechanism To Improve The Accuracy Of Intrusion Detection System.
6. Application of Bat Algorithm in Carbon Nanotubes Growing Process Parameters Optimization.

SKILLS DETAILS

Programing Languages and Tools

1. C
2. C++
3. C#
4. Python
5. Matlab

Analysis Tools and Applications

1. SPSS
2. Weka

REFEREES

1. Prof. Dr. Rosni Abdullah, http://www.usm.my/DRUG/drnizam.htm
   Senior Lecturer, Dean of School of Computer Sciences & Acting Director of Nav6 Centre, Universiti Sains Malaysia,
   11800 Pulau Penang, **Malaysia**.
   Tel: 00604 653 3001
   rosni@usm.my

2. Dr. Massudi Mahmuddin,
   http://uum.academia.edu/massudimahmuddin/CurriculumVitae
   Deputy Dean, Student Development and Alumni UUM CAS
   Internship Coordinator, Universti Utara Malaysia
   TEL: 006049285300
   ady@uum.edu.my

3. Assoc. Prof. Dr. Ibrahim Venkat,
   http://www.cs.usm.my/index.php/ibrahim-venkat-dr
   Senior Lecturer
   School of Computer Sciences, Universiti Sains Malaysia
   11800 USM, Pulau Pinang, Malaysia
   ibra@usm.my

RECOMMENDATION LETTERS

Copies of recommendation letters from above referes