Muhammad Sulaman

Ph.D. Scholar in Computer Science
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Education

- **University of Haut Alsace** — Mulhouse, France
  Ph.D in Computer Science at IRIMAS, Ensisa — *Oct 2021 - present*
  - **Research Direction**: Learning Methods, Metaheuristics, Computational Intelligence
- **Nanjing University of Aeronautics and Astronautics** — Nanjing, China
  Master of Science in Computer Science and Technology; Percentage: 87% — *Sept. 2014 – March 2017*
- **Bahauddin Zakariya University** — Multan, Pakistan
  Bachelor of Science in Information Technology; GPA: 3.36/4.00 — *Sept. 2009 – July. 2013*

Experience

- **Cyber-Reality Innovation Center** — Nanjing, China
  C++ Software Development Engineer — *May 2020 - August 2021*
  - **Projects**:
    *Asset Management System
    *Multi-Feature LED Bit Detection Algorithm
    *Feature Detection and Matching Algorithm for Printed Circuit Board (PCB) Inspection
- **Country Garden Holdings** — Foshan, China
  Senior Software Development Engineer — *Sept. 2018 - Mar. 2020*
  - **ASP.Net Software Development**: Worked on Business process modules of company's Core Sales management system. My responsibilities include researching, designing, developing and implementing new and existing modules.
  - **Overseas System Operation and Maintenance**: Communicate with overseas colleagues and process their technical work orders.
  - **Projects**:
    *Online Learning Document Management System (ASP.Net)
    *Application Version Management System (ASP.Net)
    *China Commercial Bank Online Mortgage Application Management System (ASP.Net)
- **College of Computer Science and Technology, NUAA** — Nanjing, China
  Teaching Assistant — *Sept. 2016 - March 2017*
  - **C-Programming Language**: Worked as a teaching assistant for a couple of courses which was taught to the international students at NUAA.
- **College of Computer Science and Technology, NUAA** — Nanjing, China
  Research Assistant — *Sept. 2014 - March 2017*
  - **Computational Intelligence Laboratory**: I have been working on a number of multiobjecive optimization and operational research projects such as Ready-mixed Concrete Delivery Problem, Travelling Salesman Problem and Software Next Release Problem.
- **EduSoft System Solutions** — Multan, Pakistan
  Software Engineer — *Sept. 2013 - Sept. 2014*
  - **Transport Management System**: Using C# as a development language with "Microsoft SQL Server" as a database development platform, desktop client research and development work.
  - **School management System**: Using ASP.Net as development language with "MVC" framework for Web application development£¬be familiar with HTML/CSS£¬gain some knowledge on javascript.
- **EduSoft System Solutions** — Multan, Pakistan
  Intern As a Software Developer — *Jul 2013 - Sept. 2013*

Publications

1. M. Sulaman, M. Golabi, M. Essaid, J. Lepagnot, M. Brévilliers, L. Idoumghar. Surrogate-assisted metaheuristics for the facility location problem with distributed demands on network edges. Computers & Industrial Engineering (2024).

2. M. Sulaman, M. Golabi, M. Essaid, M. Brévilliers, J. Lepagnot, L. Idoumghar. Random Forest Assisted Differential Evolution for Multi-server Congested p-median Problem. 35th International Conference on Tools with Artificial Intelligence (ICTAI) Atlanta, USA 2023.

3. M. Golabi, M. Essaid, M. Sulaman, L. Idoumghar. Extreme Learning Machine-based Genetic Algorithm for the facility location problem with distributed demands on network edges. IEEE Congress on Evolutionary Computation (CEC), Chicago, USA 2023.

4. M. Sulaman, M. Golabi, M. Brévilliers, J. Lepagnot, L. Idoumghar. A comparative study of newly developed metaheuristics for the discrete uncapacitated p-median problem. 8th International Conference on Control, Decision and Information Technologies (CoDIT) Istanbul, Turkey 2022.

5. M. Sulaman, X. Cai and M. Misir. Simulated Annealing with a Time-slot Heuristic for Ready-mix Concrete Delivery. The 11th International Conference on Simulated Evolution and Learning, Shenzhen, China 2017

6. C. Zhu, X. Cai, Z. Fan and M. Sulaman. A two-phase many-objective evolutionary algorithm with penalty based adjustment for reference lines, IEEE Congress on Evolutionary Computation (CEC), Vancouver, BC, 2016, pp. 2161-2168, Vancouver, BC, Canada 2016.

7. C. Xia, X. Cai, Z. Fan, M. Sulaman. Reference line guided pareto local search for bi-objective traveling salesman problem. 2017 IEEE International Conference on Computational Science and Engineering (CSE) and IEEE International Conference on Embedded and Ubiquitous Computing (EUC), Guangzhou, China 2017.

8. W. Sun, X. Cai, C. Xia, M. Sulaman, Z. Fan and M. Misir. Greedy Based Pareto Local Search for Bi-objective Robust Airport Gate Assignment Problem, The 11th International Conference on Simulated Evolution and Learning, Shenzhen, China 2017.

9. H. Sun, X. Cai, M. Sulaman and Z. Fan and. An Evolutionary Many-Objective Optimization Algorithm Based on Coverage and Cache Strategy, International Conference on Industrial Informatics - Computing Technology, Intelligent Technology, Industrial Information Integration, 2017.

Interest

Multi-objective Optimization, Evolutionary Algorithms, Computational Intelligence, Meta-heuristics and Machine Learning. Operations Research, Continuous and Combinatorial Optimisation.

Invited / Talks

July. 2023: Speaker, International Conference on Control, Decision and Information Technologies (CoDIT)
Nov. 2016: Program host, First International Academic Conference for Graduated 2016, NUAA, Nanjing.
July. 2017: Speaker, The 11th International Conference on Simulated Evolution and Learning, 2017 Shenzhen.
Oct. 2017: Program host, Second International Academic Conference for Graduated 2017, NUAA, Nanjing.

Awards & Honours

1. Qualified for Fully Funded Chinese Government Scholarship for Masters
2. Project funding for doctoral research at ENSISA France
3. Class leader elected by students

Projects

- **Hybrid Heuristic for Solving Ready-mixed Concrete Delivery Problem**: A Simulated annealing is combined with a time-slot heuristic (SA-TH) for solving the Concrete Delivery problem. This algorithm is coded by using Java.
- **Algorithm for Software Next Release Problem**: This Algorithm is designed for solving the Multi-objective Software Next Release Problem using Matlab.
- **Evolutionary Algorithm for Solving Multi-objective Algorithm for Solving MTSP**: This is algorithm is designed for solving the Multi-objective Travelling Salesman Problem. It is coded by using C++ programming language.

Skills

Programming: Python, C/C++
Web Technologies: HTML (CSS), JScript
Database Systems: Oracle, Ms/MySQL

Personal

Languages: Urdu (Native), English (C2), French (B1), Chinese (A2)