

Saykat Dutta, Ph.D.


Curriculum Vitae

Personal Statement




With more than 5 years of research experience in evolutionary computing relating to multi/many-objective optimization. Motivated and consistent in organizational capabilities facilitating streamlined administrative and academic operations.

Personal Details




Contact Information  Institute of Statistical Science, Academia Sinica, Nangang, Taipei 115, Taiwan.

 saykatdutta@stat.sinica.edu.tw / saykatdutta@gmail.com

Work Experiences





- Apr. 2023 –  **Post-Doc Fellow**, Institute of Statistical Science, Academia Sinica, Taiwan.
- Apr. 2022 – Jan. 2023  **Assistant Professor**, Department of Mathematics, Brainware University, India.
- Jan. 2017 – Dec. 2021  **Teaching Assistant**, Department of Mathematics, National Institute of Technology Silchar, India.








Education

- Aug. 2016 – Nov. 2022  **Ph.D., National Institute of Technology Silchar, India**, in Mathematics.
Thesis title: *Design of Efficient Evolutionary Approaches for Multi/Many-Objective Optimization Problems with Novel Mating/Environmental Selection Strategies and Its Application.*
- Aug. 2014 – May. 2016  **M.Sc., National Institute of Technology Silchar, India**, in Mathematics.
Thesis title: *A New Method for Solving Generalized Intuitionistic Fuzzy Linear Programming Problem.*
- June. 2011 – May. 2014  **B.Sc. Honours, Santipur College, University of Kalyani, India**, in Mathematics.

Research Publications

Journal Articles

-  S. S. R. M, S. Dutta, R. Mallipeddi, K. N. Das, and D.-G. Lee, “A constrained multi-objective evolutionary algorithm with clustering based weight vector adaptation,” *Swarm and Evolutionary Computation*, vol. 84, p. 101 432, 2024, ISSN: 2210-6502.  DOI: <https://doi.org/10.1016/j.swevo.2023.101432>.
-  S. S. Raju M, P. Mohapatra, S. Dutta, R. Mallipeddi, and K. N. Das, “Optimal placement of fixed hub height wind turbines in a wind farm using twin archive guided decomposition based multi-objective evolutionary algorithm,” *Engineering Applications of Artificial Intelligence*, vol. 130, p. 107 735, 2024, ISSN: 0952-1976.  DOI: <https://doi.org/10.1016/j.engappai.2023.107735>.

- 3 S. Dutta, S. S. R. M, R. Mallipeddi, and K. N. Das, "Adaptive mating selection based on weighted indicator for multi/many-objective evolutionary algorithm," *Applied Soft Computing*, vol. 139, p. 110 223, 2023, ISSN: 1568-4946.  DOI: <https://doi.org/10.1016/j.asoc.2023.110223>.
- 4 K. N. Das, S. Dutta, M. S. S. Raju, and P. D. Roy, "A robust environmental selection strategy in decomposition based many-objective optimization," vol. 82, no. 6, 2022, ISSN: 1380-7501.  DOI: [10.1007/s11042-022-12974-1](https://doi.org/10.1007/s11042-022-12974-1).
- 5 P. Mohapatra, S. Roy, K. N. Das, S. Dutta, and M. S. S. Raju, "A review of evolutionary algorithms in solving large scale benchmark optimisation problems," *International Journal of Mathematics in Operational Research*, vol. 21, no. 1, pp. 104-126, 2022.  DOI: [10.1504/IJMOR.2022.120340](https://doi.org/10.1504/IJMOR.2022.120340).
- 6 M. S. S. Raju, S. Dutta, R. Mallipeddi, and K. N. Das, "A dual-population and multi-stage based constrained multi-objective evolutionary," *Information Sciences*, vol. 615, pp. 557-577, 2022, ISSN: 0020-0255.  DOI: <https://doi.org/10.1016/j.ins.2022.10.046>.
- 7 S. Dutta, S. S. R. M, R. Mallipeddi, K. N. Das, and D.-G. Lee, "A mating selection based on modified strengthened dominance relation for nsga-iii," *Mathematics*, vol. 9, no. 22, 2021, ISSN: 2227-7390.  DOI: [10.3390/math922837](https://doi.org/10.3390/math922837).
- 8 S. Dutta, R. Mallipeddi, and K. N. Das, "Hybrid selection based multi/many-objective evolutionary algorithm," *Scientific Reports*, vol. 12, 2021.  DOI: [10.1038/s41598-022-10997-0](https://doi.org/10.1038/s41598-022-10997-0).
- 9 S. Saha, Maity, S. Dey, and S. Dutta, "Modeling and combined application of moea/d and topsis to optimize weld performances of a286 superalloy," *Soft Computing*, vol. 25, pp. 14 697-14 713, 2021.  DOI: [10.1007/s00500-021-06264-5](https://doi.org/10.1007/s00500-021-06264-5).

Conference Proceedings

- 1 M. S. S. Raju, K. N. Das, and S. Dutta, "A multi-objective evolutionary algorithm with clustering-based two-round selection strategy," in *Biologically Inspired Techniques in Many Criteria Decision Making*, S. Dehuri, B. S. Prasad Mishra, P. K. Mallick, and S.-B. Cho, Eds., Singapore: Springer Nature Singapore, 2022, pp. 537-549, ISBN: 978-981-16-8739-6.
- 2 S. Dutta and K. N. Das, "A survey on pareto-based eas to solve multi-objective optimization problems," in *Soft Computing for Problem Solving*, J. C. Bansal, K. N. Das, A. Nagar, K. Deep, and A. K. Ojha, Eds., Singapore: Springer Singapore, 2019, pp. 807-820.


Interests

Research Interests: *Multi/Many-objective Optimization, Constraint Optimization, Molecular Optimization, Soft-Computing, Evolutionary Algorithms.*


Teaching Interests: *Optimization, Linear Algebra, Soft-Computing, Operation Research, Probability.*

Url Research



 <https://scholar.google.com/citations?user=gBTuq0WTNGEC&hl=en>




 <https://www.linkedin.com/in/dr-saykat-dutta-936b21b2/>



 <https://www.researchgate.net/profile/Saykat-Dutta/>



 <https://github.com/Saykat1993/>

Service to the Scientific Community

Reviewer for the Journals: *Information Science, Swarm and Evolutionary Computation, Applied Soft Computing, Engineering Applications of Artificial Intelligence, Journal of Computational and Applied Mathematics, IEEE Transactions on Systems, Man and Cybernetics: Systems, IEEE Access*

Skills

Languages 📖 Reading, writing and speaking competencies for English, Bengali and Hindi.
Coding 📖 C, C++, Python, MatLab, \LaTeX .

Miscellaneous Experience

Talks and Poster Presentations

- 2024 📖 Postdoc Seminar (Jan.), Institute of Statistical Science, Academia Sinica.
Talk Title: Adaptive Weighted Indicator-based Mating Selection for Multi-objective Evolutionary Algorithm to Solve Path Planning of UAV
- 2023 📖 ISI-ISM-ISSAS Joint Meeting (Dec.), ISI Kolkata.
Talk Title: Adaptive Weighted Indicator-based Mating Selection for Multi-objective Evolutionary Algorithm to Solve Path Planning of UAV
- 2020 📖 Research Scholar Day (Feb.), NIT Silchar.
Talk Title: Many Objective Optimization: A Computational approach

Awards and Achievements

- 2017 📖 **Best Paper Award**, presenting a paper A survey on Pareto-based eas to solve multi-objective optimization problems in 7th International Conference on Soft Computing For Problem Solving, SocProS 2017, IIT Bhubaneswar, India.
- 2023 📖 **Postdoc Fellowship**, The Ministry of Science and Technology (MOST)- Project Code: NSTC 112-2811-M-001-036, Academia Sinica, Taiwan.
- 2024 📖 **Postdoc Fellowship**, Academia Sinica Postdoctoral Fellowship, Institute of Statistical Science, Academia Sinica, Taiwan.



Conference Attended

- 2021 📖 27th International Conference of International Academy of Physical Sciences, NIT Silchar, CO-NIAPS XXVII.
- 2020 📖 Poster Presentation in Anveshan 2.0, Student Research Convention, NIT Silchar.
 📖 Research Scholar Day, NIT Silchar.
- 2017 📖 7th International Conference on Soft Computing For Problem Solving, IIT Bhubaneswar, SocPros.

Workshop Attended

- 2018 📖 Recent Trends on Optimization in Science and Engineering, NIT Silchar.
 📖 Recent Advances in Fuzzy Optimization, NIT Silchar.
- 2017 📖 Advances in Stability Analysis on Dynamical Systems, NIT Silchar.
 📖 Recent Trends on Optimization Techniques in Science and Engineering, NIT Silchar.
 📖 Advances in Applied Mathematics, NIT Silchar.
 📖 Applications of optimization Techniques in Engineering and Technology, NIT Silchar.
- 2016 📖 Advances in Applications of Computational Fluid Dynamics, NIT Silchar.

Miscellaneous Experience (continued)

- 2015  Mathematical Methods in Physical Sciences, NIT Silchar and ISI Kolkata.
- 2015  Reliability Theory and its Applications to Real Life Problems, NIT Silchar and ISI Kolkata.

Declaration

I hereby declare that all the information furnished above is true to the best of my knowledge and bear the responsibility of the details.