

Multiobjective optimization

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Chiandussi et al. (2012) present several multiobjective optimization methods.

Questions

1. Explain at least 3 methods. Describe at least two applications for which these methods have been used and explain how they were used. Based on the results from the literature, explain the advantages and shortcomings of these methods.
2. Implement two methods described by Chiandussi et al. (2012) and test them on at least 3 benchmark functions. Explain the results. What are the advantages and shortcomings of the methods based on your implementation?

References

Chiandussi, G., Codegone, M., Ferrero, S., and Varesio, F. (2012). Comparison of multi-objective optimization methodologies for engineering applications. *Computers and Mathematics with Applications*, 63:912–942.