

Special Session on Multi-objective Optimization in Computational Biology and Bioinformatics

The concept of Pareto optimization lends flexibility to the formulation of many problems in computational biology. The consideration of multiple objectives can be helpful for a range of different reasons, ranging e.g. from a more complete (or accurate) problem description to counterbalancing possible biases intrinsic to certain single-objective formulations. For this reason, meta-heuristics for multi-objective optimization have seen increasing use in this area, with applications ranging from multi-objective sequence alignment, over multi-objective feature selection to multi-objective protein structure prediction. This special session invites submissions related to the use of multi-objective optimization in computational biology and bioinformatics applications, including but not limited

- Problems in structural biology, such as protein structure prediction and protein docking
- Network inference problems, e.g. of gene regulatory networks
- Machine learning using different forms of biological data, such as gene expression data or new generation sequencing data
- Drug discovery problems

Expected number of submissions: 10

Special Session Organizers:

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