

# A Supplementary File for “A Decomposition-based Hybrid Evolutionary Algorithm for Multi-modal Multi-objective Optimization”

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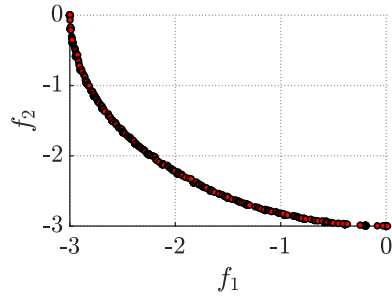
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***Abstract***—This file includes the supplementary materials for the paper titled “A Decomposition-based Hybrid Evolutionary Algorithm for Multi-modal Multi-objective Optimization”.

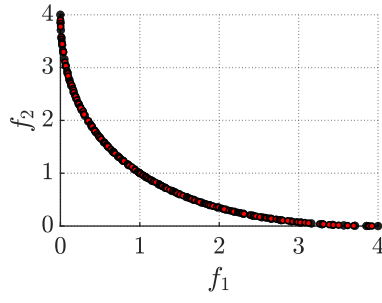
***Index Terms***—*Multi-objective optimization, multi-modal multi-objective optimization, niching, MOEA/D.*

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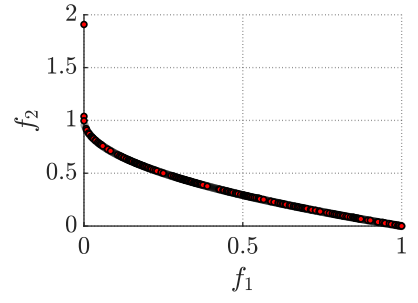
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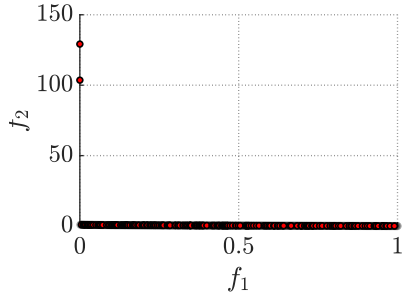
(a) Omni-test.



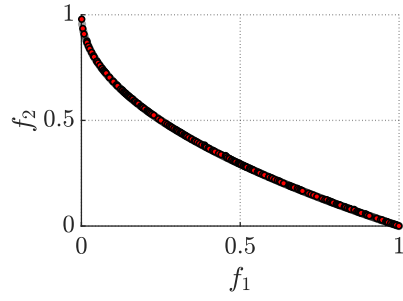
(b) SYM-PART.



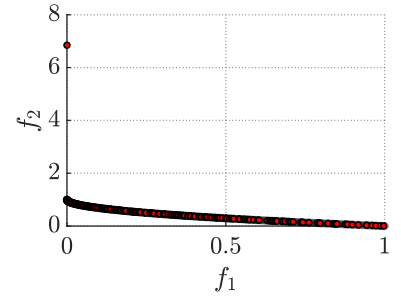
(c) MMF1.



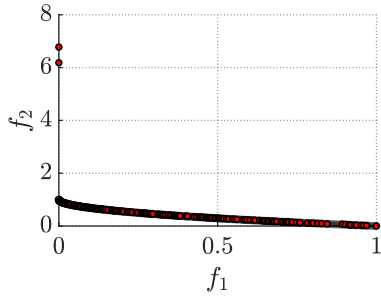
(d) MMF1\_e.



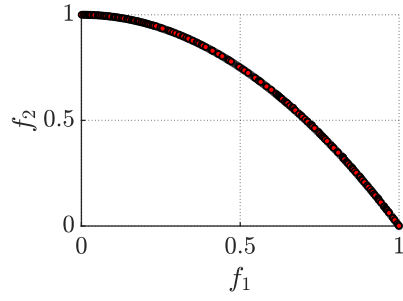
(e) MMF1\_z.



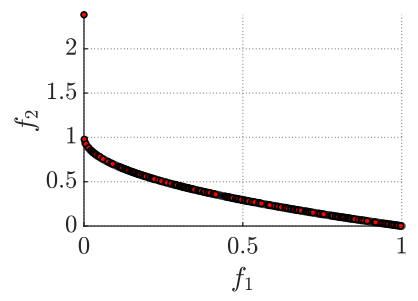
(f) MMF2.



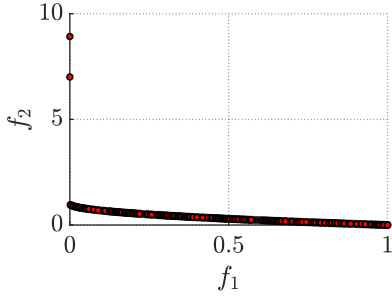
(g) MMF3.



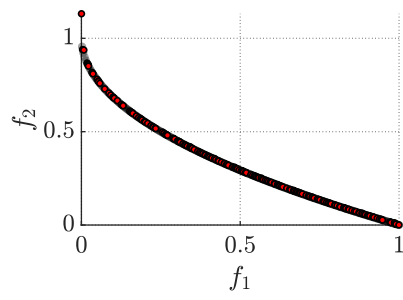
(h) MMF4.



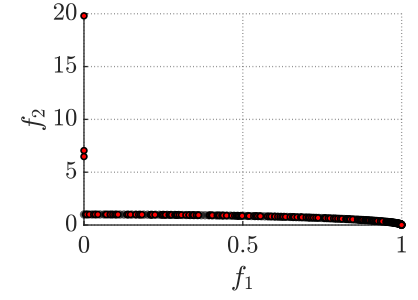
(i) MMF5.



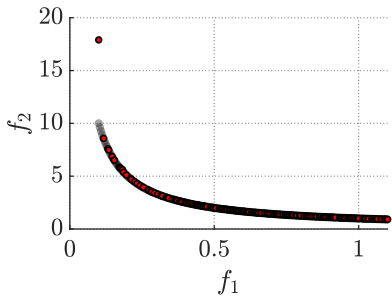
(j) MMF6.



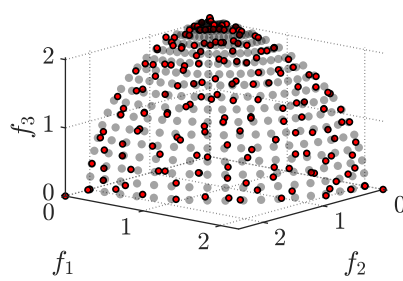
(k) MMF7.



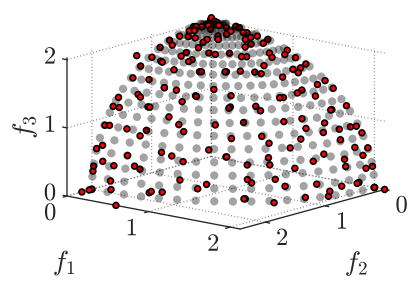
(l) MMF8.



(m) MMF9.



(n) MMF14.



(o) MMF14\_a.

Fig. 1. The final population obtained by a single run of MMHEA/D on each of the 15 MMOPs. Results are shown in the objective space. Obtained solutions are denoted by red circles, and gray circles are uniformly sampled Pareto optimal solutions on the Pareto front.