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Title	A Hybrid Genetic Algorithm and Sperm Swarm Optimization (HGASSO) for Multimodal Functions
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Abstract	<p>In this paper, we propose a hybrid algorithm combining two different metaheuristic methods, “Genetic Algorithms (GA)” and “Sperm Swarm Optimization (SSO)”, for the global optimization of multimodal benchmarks functions. The proposed Hybrid Genetic Algorithm and Sperm Swarm Optimization (HGASSO) operates based on incorporates concepts from GA and SSO in which generates individuals in a new iteration not only by crossover and mutation operations as proposed in GA, but also by techniques of local search of SSO. The main idea behind this hybridization is to reduce the probability of trapping in local optimum of multi modal problem. Our algorithm is compared against GA, and SSO metaheuristic optimization algorithms. The experimental results using a suite of multimodal benchmarks functions taken from the literature have evinced the superiority of the proposed HGASSO approach over the other approaches in terms of quality of results and convergence rates in which obtained good results in solving the multimodal benchmarks functions that include cosine, sine, and exponent in their formulation.</p>