Inspired by Fireworks: A Novel Swarm Intelligence Algorithm

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The explosion of fireworks inspired a new algorithm for global optimization of complex functions, the Fireworks Algorithm (FWA). The algorithm mimics the process of exploding fireworks. It is a swarm intelligence algorithm that explores a very large solution space by choosing a set of random points confined by some distance metric in the hopes that one or more of them will yield promising results (it explodes at one point and scatters more sparks around itself. Each spark location is evaluated, and the algorithm terminates if an optimal location was found otherwise it repeats with n new firework locations).

In this talk, I will briefly explain how the algorithm works, with various applications.

References

[1] Tan, Y., Zhu, Y. (2010, June). Fireworks algorithm for optimization. In International conference in swarm intelligence (pp. 355-364). Springer, Berlin, Heidelberg.