DEEDA
Differential Evolutionary and Estimation of Distribution Algorithm

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Motivation:

Taking into account the results of the Differential Evolution (DE) and its combination with other optimization algorithms, and the results of the Estimation of Distribution Algorithms (EDAs), using the Normal and Cauchy distributions, in the WCCI / GECCO 2019 competition. Will the hybrid of DE and EDA give better results?
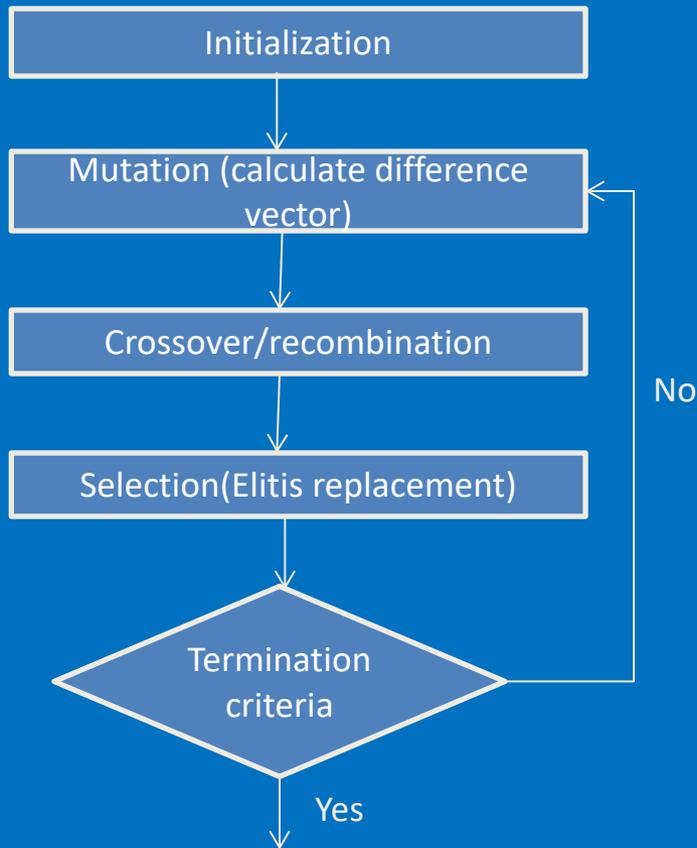
Innovation:

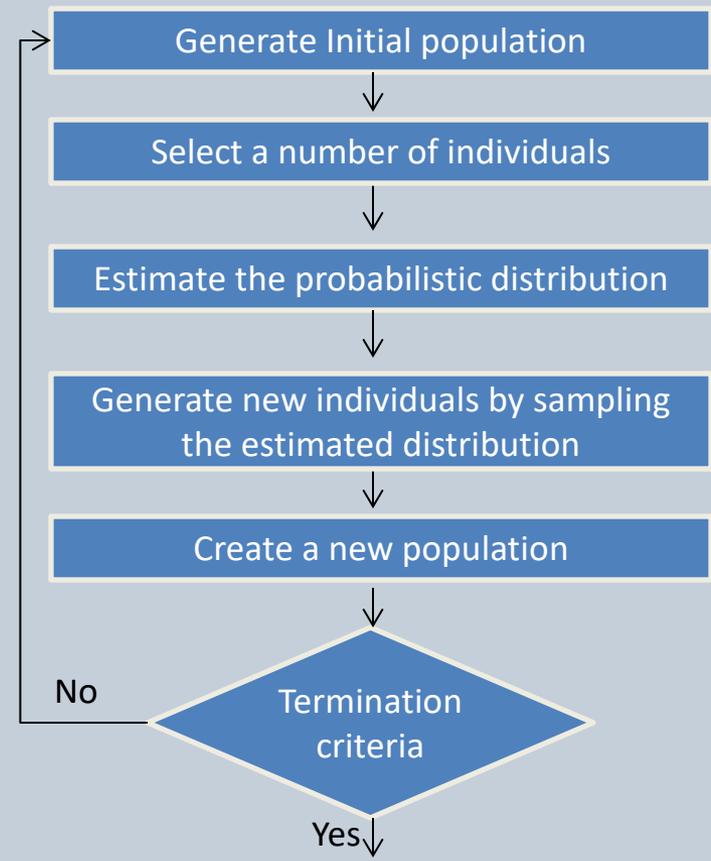The advantage of hybridization of these methods is that they guide the optimum in a globally correct direction.

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DEEDA
Differential Evolutionary and Estimation of Distribution Algorithm

Differential Evolution (DE)

Initialization

Mutation (calculate difference vector)

Crossover/recombination

Selection(Elitis replacement)

Termination criteria

No

Yes

DEEDA

Estimation of Distribution Algorithm (EDA)

Generate Initial population

Select a number of individuals

Estimate the probabilistic distribution

Generate new individuals by sampling the estimated distribution

Create a new population

Termination criteria

No

Yes

First Phase: To Find the Partial Solution

Second Phase: To Find the Global Solution