

Fig. 1A

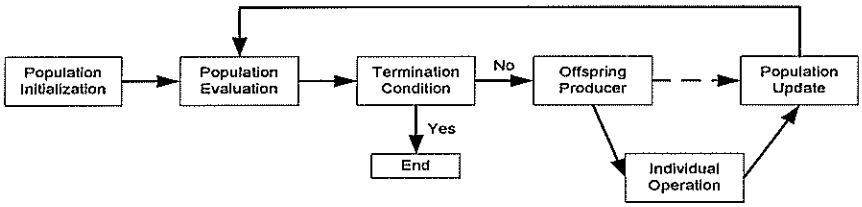


Fig. 1B

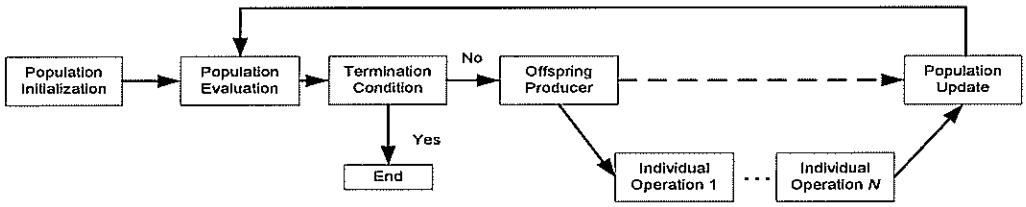


Fig. 1C

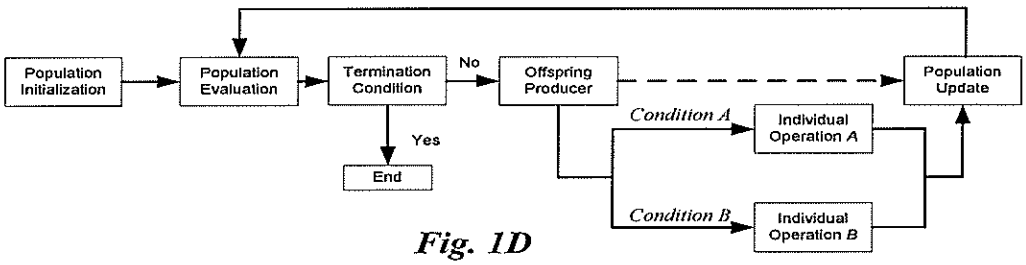


Fig. 1D

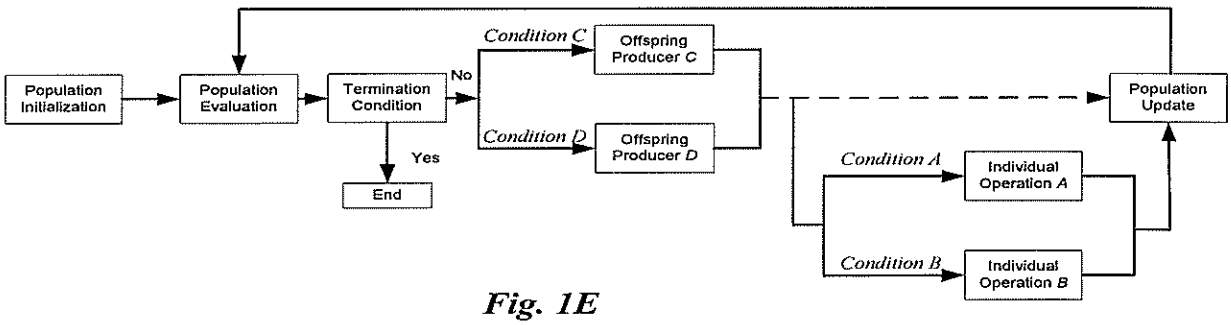


Fig. 1E

FIG.1

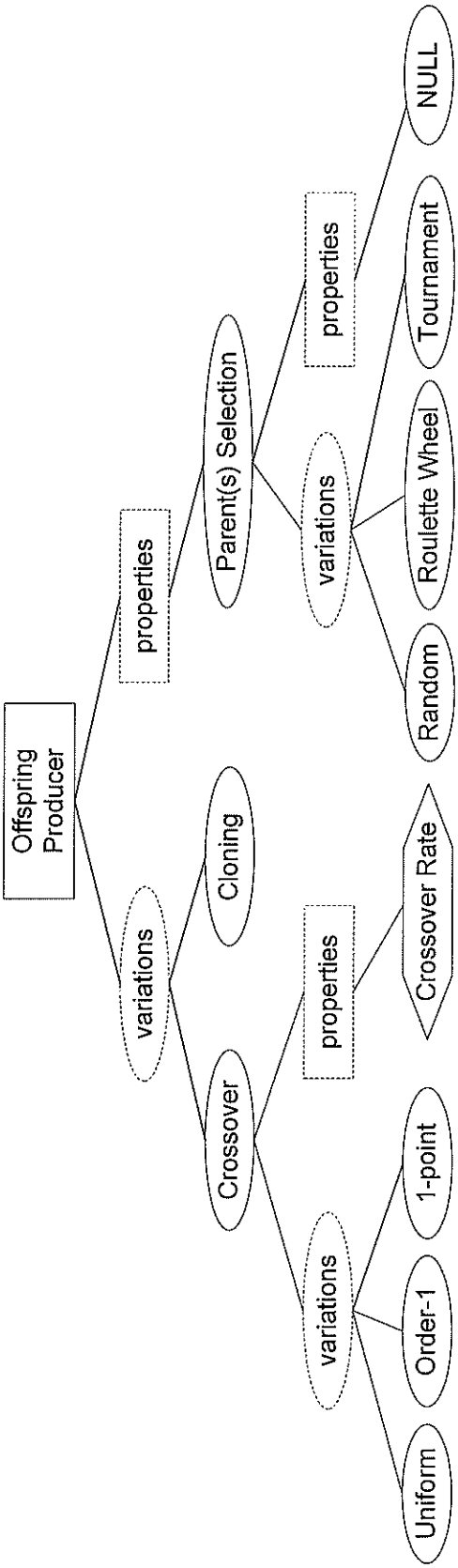
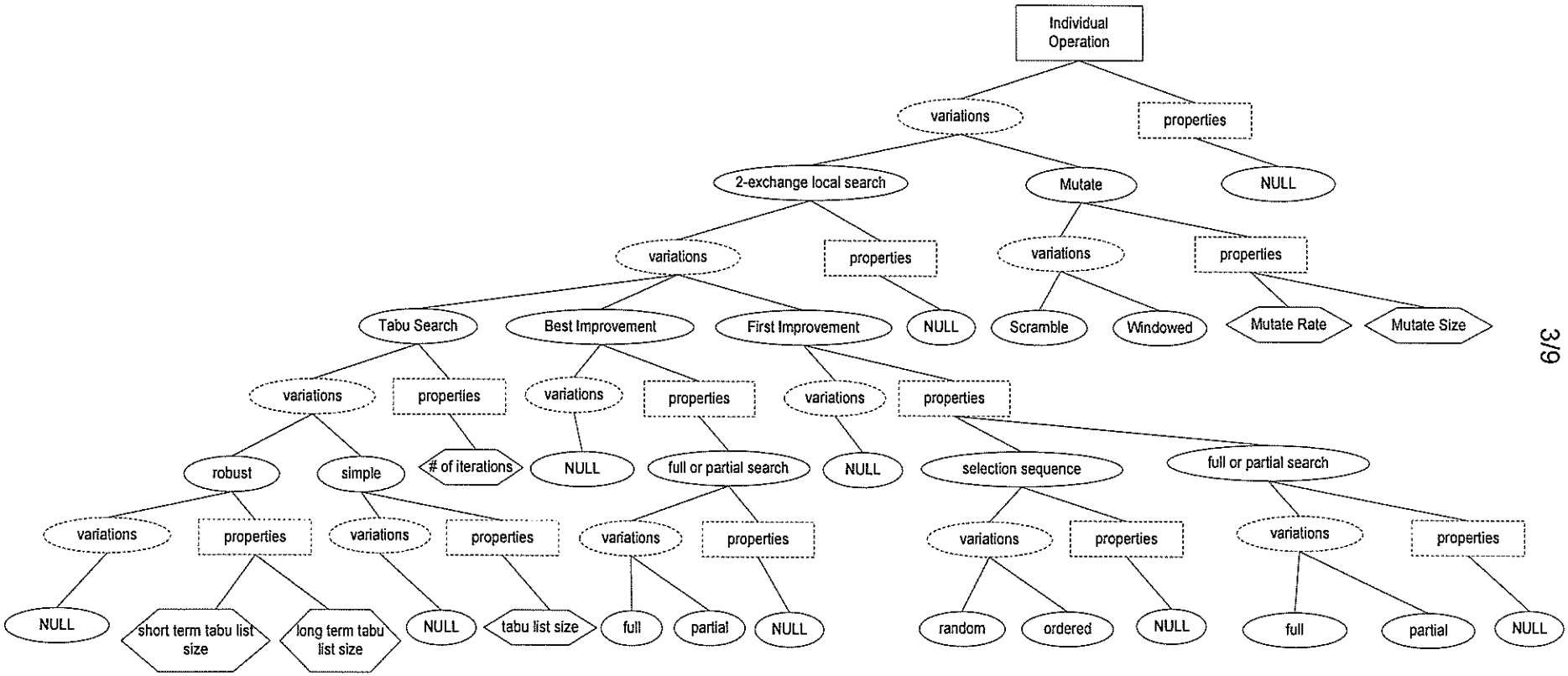

Offspring Producer
properties
variations
Parent(s) Selection
Cloning
Crossover
properties
variations
properties
variations
NULL
Tournament
Roulette Wheel
Random
Crossover Rate
1-point
Order-1
Uniform

FIG.2


Individual Operation
variations
properties
2-exchange local search
Mutate
NULL
variations
properties
variations
properties
Tabu Search
Best Improvement
First Improvement
NULL
Scramble
Windowed
Mutate Rate
Mutate Size
variations
properties
variations
properties
variations
properties
robust
simple
# of iterations
NULL
full or partial search
NULL
selection sequence
full or partial search
variations
properties
variations
properties
variations
properties
variations
properties
NULL
short term tabu list size
long term tabu list size
NULL
tabu list size
full
partial
NULL
random
ordered
NULL
full
partial
NULL

3/9

FIG.3

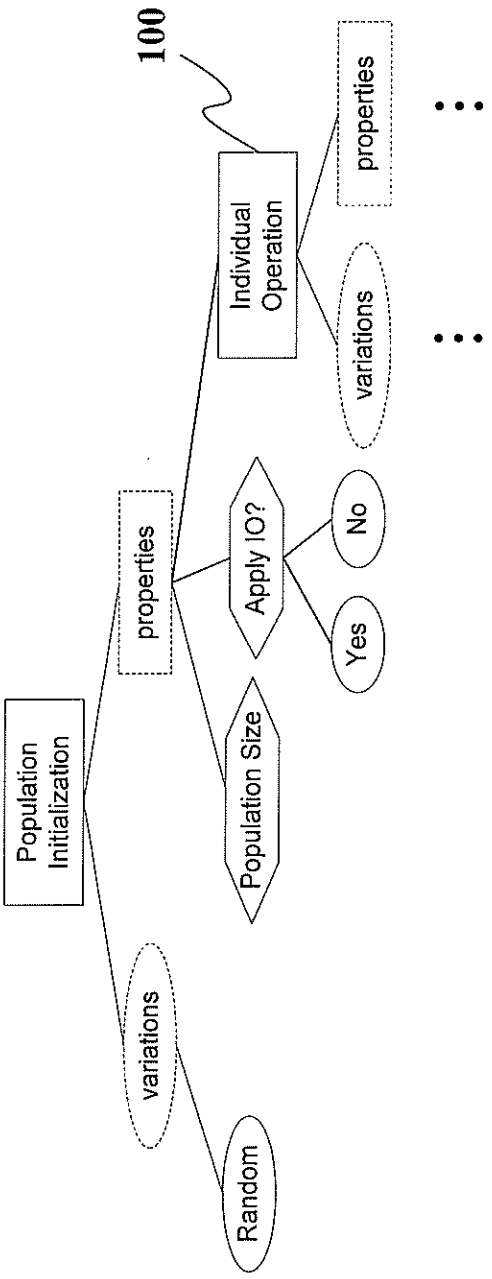

100
Population Initialization
properties
variations
Random
Population Size
Apply IO?
Yes
No
Individual Operation
variations
properties

FIG.4

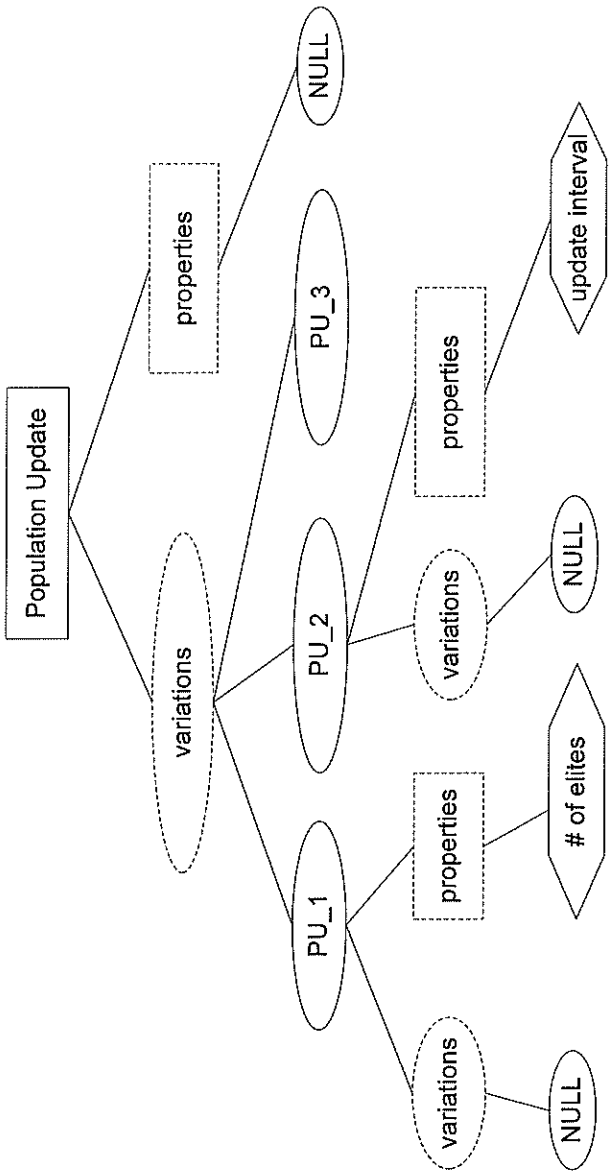

Population Update
properties
variations
NULL
PU_3
PU_2
PU_1
properties
variations
update interval
properties
variations
NULL
# of elites
NULL

FIG. 5

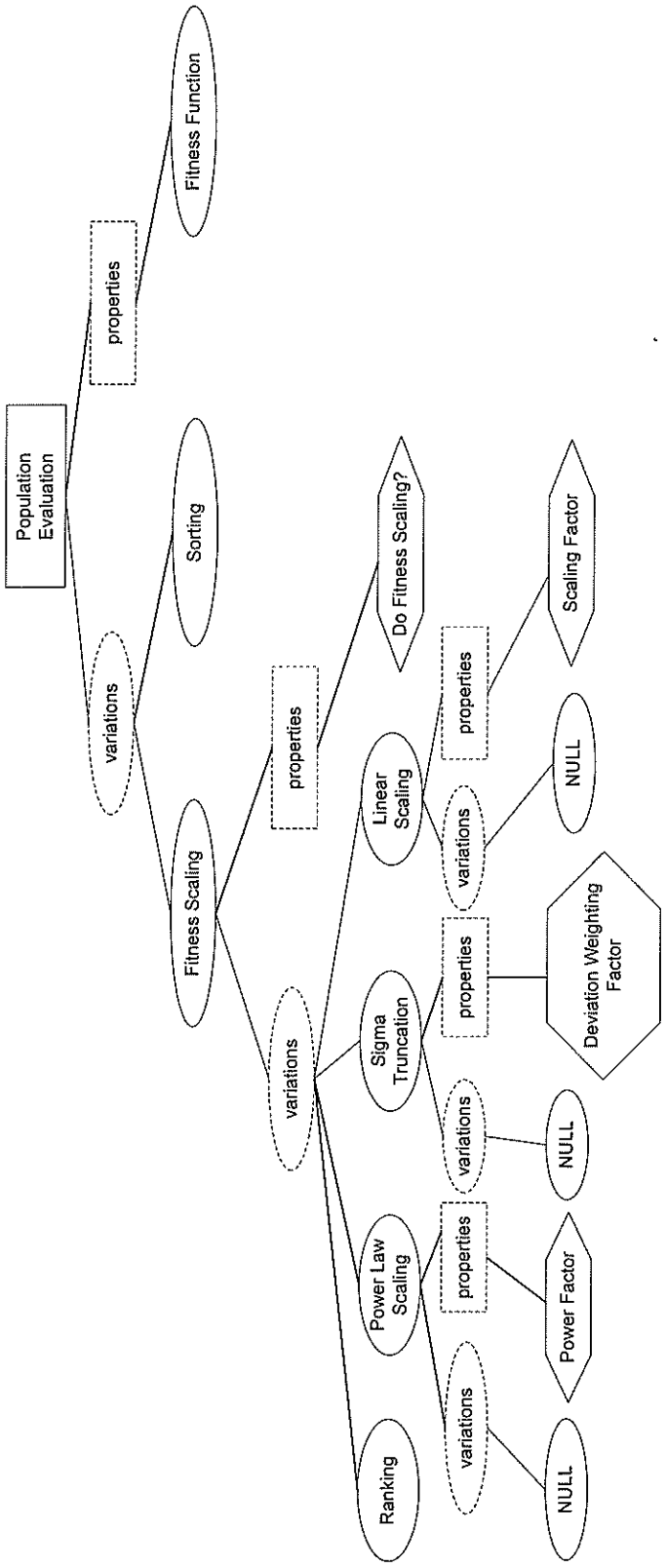

Population Evaluation
properties
Fitness Function
variations
Sorting
Fitness Scaling
properties
Do Fitness Scaling?
variations
Linear Scaling
properties
Scaling Factor
variations
NULL
Sigma Truncation
properties
Deviation Weighting Factor
variations
NULL
Power Law Scaling
properties
Power Factor
variations
NULL
Ranking

FIG. 6

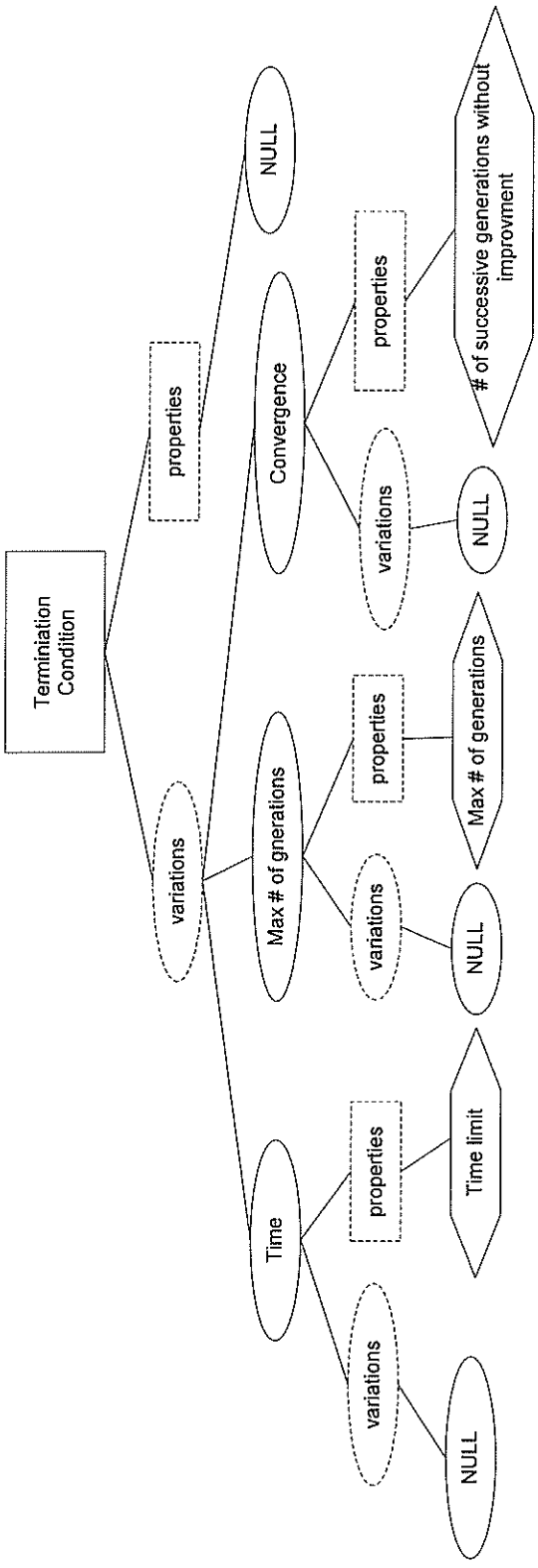

Terminiation Condition
properties
variations
NULL
Convergence
properties
variations
# of successive generations without improvment
NULL
Max # of gnerations
properties
variations
Max # of generations
NULL
Time
properties
variations
Time limit
NULL

FIG. 7

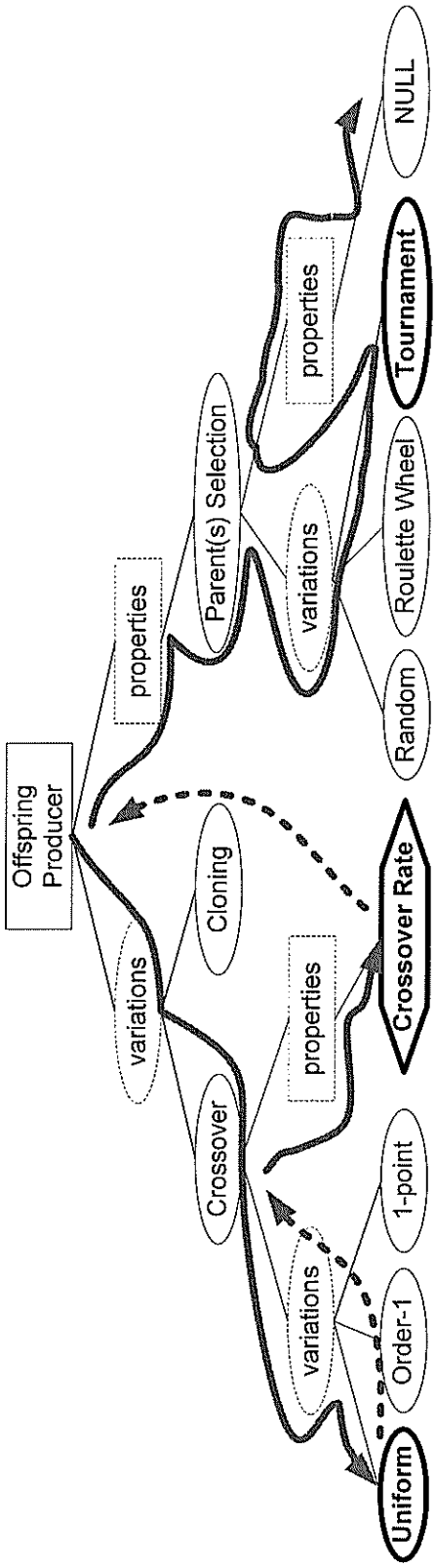

Offspring Producer
variations
Cloning
properties
Parent(s) Selection
variations
Roulette Wheel
Random
properties
Tournament
NULL
Crossover
variations
Order-1
1-point
properties
Crossover Rate
Uniform

FIG. 8

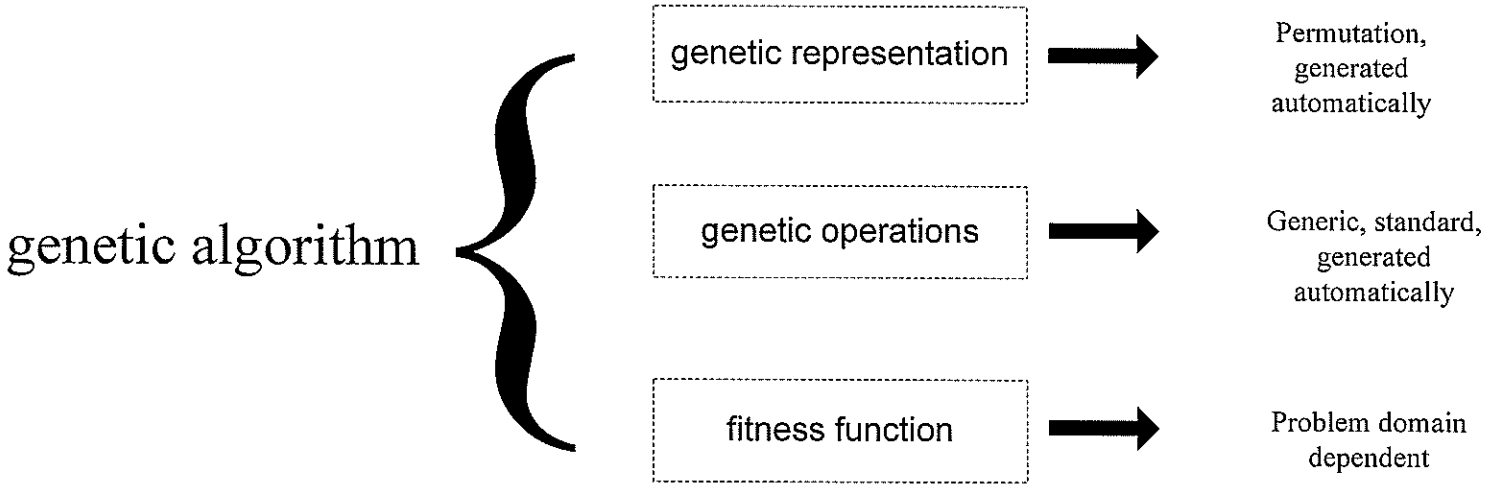

genetic algorithm
genetic representation
genetic operations
fitness function
Permutation, generated automatically
Generic, standard, generated automatically
Problem domain dependent

FIG. 9