Generate initial population P_0 of size N using Latin hypercube sampling

Rank and sort P_0 based on non-domination level

Create offspring population Q_0 using k different algorithms. Each algorithm creates (N/k) points

Set $t = 0$, and T = maximum number of generations

while $t < T$ **do**

$R_t = P_t \cup Q_t$

Partition R_t into different fronts $F_1, F_2, \ldots$

Set $P_{t+1} = \varnothing$ and $i = 1$

while $|P_{t+1}| < N$ **do**

Calculate crowding distance in F_i

if $|F_i| + |P_{t+1}| = \mathrm{N}$ **then**

$P_{t+1} = P_{t+1} \cup F_i$

else

if $|F_i| + |P_{t+1}| \leq N$ **then**

Sort F_i members in order of decreasing crowding distance

P_{t+1} = P_{t+1} + the first $(N - |P_{t+1}|)$ elements of F_i

end if

end if

$i = i + 1$

end while

Calculate crowded comparison operator $\forall i \in P_{t+1}$

Calculate the number of offspring points, P_{t+1}^k each of the k algorithms contributed to P_{t+1}

Set $j = 1$

while $j \leq k$ **do**

For adaptive offspring creation, calculate $N_{t+1}^j = N \cdot (P_{t+1}^j / N_t^j) / \sum_{w=1}^{k} (P_{t+1}^w / N_t^w)$

$j = j + 1$

end

Create Q_{t+1} by generating N_{t+1}^k offspring points with each of the k individual algorithms

$t = t + 1$

end while