
Algorithm 1: AACONC Algorithm

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1 Function  
   AACONC( $V, n_{ants}, n_{freq}, n_{size}, n_{sect}, n_{prim}, T_{update}, \alpha, \beta, \rho_{min}, \rho_{max}, \delta$ )  
2    $|R| \leftarrow \infty$ ;  
3    $iter \leftarrow 0$ ;  
4   Initialize pheromone matrices  $\tau$ ;  
5   for each  $v_i \in V$  do  
6      $K(v_i) \leftarrow \text{CreateClusters}(V, v_i, n_{size}, n_{sect})$ ;  
7   while not terminated do  
8      $|R_{best}| \leftarrow \infty$ ;  
9      $iter \leftarrow iter + 1$ ;  
10    for  $a = 1$  to  $n_{ants}$  do  
11       $R_a \leftarrow \text{AntSolution}(V, K, \tau, \alpha, \beta)$ ;  
12      if  $|R_a| < |R_{best}|$  then  
13         $R_{best} \leftarrow R_a$ ;  
14    if  $iter \bmod n_{freq} = 0$  then  
15       $R_{best} \leftarrow \text{LocalOptimization}(V, R_{best})$ ;  
16    if  $|R_{best}| < |R|$  then  
17       $R \leftarrow R_{best}$ ;  
18    Update pheromone matrices  $\tau$ ;  
19    Calculate evaporation coefficient  $\rho$ ;  
20    Evaporate pheromone matrices  $\tau$  using  $\rho$ ;  
21  return  $R$ ;
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