Algorithm 1: AACONC Algorithm

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 τ;

5   **for** *each* $v_i \in V$ **do**

6 $K(v_i) \leftarrow$ CreateClusters$(V, v_i, n_{\text{size}}, n_{\text{sect}})$;

7   **while** *not terminated* **do**

8 $|R_{\text{best}}| \leftarrow \infty$;

9 $iter \leftarrow iter + 1$;

10   **for** $a = 1$ *to* n_{ants} **do**

11 $R_a \leftarrow$ AntSolution$(V, K, \tau, \alpha, \beta)$;

12   **if** $|R_a| < |R_{best}|$ **then**

13 $R_{\text{best}} \leftarrow R_a$;

14   **if** $iter \mod n_{freq} = 0$ **then**

15 $R_{\text{best}} \leftarrow$ LocalOptimization(V, R_{best});

16   **if** $|R_{best}| < |R|$ **then**

17 $R \leftarrow R_{\text{best}}$;

18   Update pheromone matrices τ;

19   Calculate evaporation coefficient ρ;

20   Evaporate pheromone matrices τ using ρ;

21   **return** R;