Algorithm 1: α-StackSort

```
1  def alpha_stack_sort(t):
2      X ← ∅
3      n ← len(t)
4      i ← 0
5      while i < n do
6          R = (start, end, is_increasing) ← run_detect(t, i, n)
7          if not is_increasing then
8              t[start : end + 1] ← t[start : end + 1][:: −1]
9          X ← X + R
10         μ(t, X)
11         i ← end + 1
12     while Card(X) ≥ 1 do
13         R_1 = (start_1, end_1, is_increasing_1) ← X.pop()
14         R_2 = (start_2, end_2, is_increasing_2) ← X.pop()
15         X ← X + R_1 ⊕ R_2
16         merge(t, start_1, end_1 + 1, end_2 + 1)
```