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INTERSECTING( $P$ )
1   $l \leftarrow \text{SEARCHLEXICOGRAPHICSMALLEST}(P)$ 
2   $S[0] \leftarrow P[l]$ 
3   $P \leftarrow P \setminus \{P[l]\}$ 
4   $C \leftarrow \text{BACKTRACKING}(\emptyset, P, 0, S)$ 
5   $n \leftarrow \text{length}[C]$ 
6  if  $C[1].x > C[n].x$ 
7      then for  $i \leftarrow 0$  to  $(\lfloor n/2 \rfloor - 1)$ 
8          do  $C[i+1] \leftrightarrow C[n-i]$ 
9      else if  $C[1].x = C[n].x$ 
10         then if  $C[1].y > C[n].y$ 
11             then for  $i \leftarrow 0$  to  $(\lfloor n/2 \rfloor - 1)$ 
12                 do  $C[i+1] \leftrightarrow C[n-i]$ 
13  return  $C$ 

```

Figure 5: pseudo-code of the Self-intersecting-curve algorithm.