

Accurate Extraction of the Self-Rotational Speed for Cells in an Electrokinetics Force Field by an Image Matching Algorithm

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1.  $F \leftarrow [MNC_{21}, MNC_{32}, \dots, MNC_{N-1, N-2}]$ 
2.  $B \leftarrow [MNC_{32}, MNC_{43}, \dots, MNC_{NN-1}]$ 
3.  $F\_s \leftarrow F$ 
4. Set  $F\_index[i] = i$ , where  $i = 1, 2, \dots, N-2$ 
5. for  $i \leftarrow 1$  to  $N-3$ 
6.    $min \leftarrow \infty$ 
7.   for  $j \leftarrow i$  to  $N-2$ 
8.     if  $F\_s[j] < min$ 
9.       then  $min \leftarrow F\_s[j]$ 
10.       $minlabel \leftarrow j$ 
11.     end if
12.   end for
13.   exchange  $F\_s[i] \leftrightarrow F\_s[minlabel]$ 
14.   exchange  $F\_index[i] \leftrightarrow F\_index[minlabel]$ 
15. end for
16. Do from Line 3 to Line 15 for  $B$  getting  $B\_s$  and  $B\_index$ 
17.  $min \leftarrow \infty$ 
18. for  $i \leftarrow 1$  to  $N-2$ 
19.   for  $j \leftarrow 1$  to  $N-2$ 
20.     if  $B\_index[j] == F\_index[i] \ \&\& \ i+j < min$ 
21.       then  $min \leftarrow i+j$ 
22.        $l \leftarrow i$ 
23.     end if
24.   end for
25. end for
26.  $ReferenceFrameNo = F\_index[l] + 1$ 

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Figure S1. Pseudo code for choosing the reference frame.