

ERRATUM

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Erratum to: Structural and functional analytics for community detection in large-scale complex networks

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Erratum

After the publication of this work [1], we noticed that an incorrect version of Table two (Table 1 here) was published. An incorrect version of Algorithm four (Algorithm 1 here) was also published. The correct versions of Table two and Algorithm four are provided here and have been updated in the original article.

The publisher apologises for any inconvenience caused.

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Reference

1. Chopade Z (2015) Structural and functional analytics for community detection in large-scale complex networks. *J Big Data* 2:11

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Table 1 Modularity Comparison

Algorithms→		FN	DGA	FD	MSTAB	MMOC
Networks↓	Size↓	Q FN	Q DGA	Q FD	Q MSTAB	(Q Our method)
PhD's in CS	1882	0.9610	0.9610	0.9295	0.9601	0.9755
Facebook	1899	0.2717	0.2567	0.3751	0.3742	0.3860
SciMet	3084	0.5469	0.5949	0.6146	0.6146	0.6502
US Power Grid	4941	0.9341	0.9358	0.9347	0.9348	0.9587

FN Fast Newman based on a greedy agglomerative method

DGA Modularity optimization based on Danon greedy agglomerative method

FD Fast detection of communities using modularity optimization

MSTAB Modularity based on stability

MMOC Modified Modularity for Overlapping Community Detection (Our method)

Algorithm 4: Modularity Maximization

```

1:  $G_n(V, E)$  the initial network
2: repeat
3:   Put each node of  $G_n$  in its own community
4:   Calculate  $Q^W$  from pairs of connected communities
5:   while some nodes are moved do
6:     for all  $N$  node of  $G_n$  do
7:       place  $N$  in its neighboring community including its own
8:       while maximal  $Q^W > 0$  do
9:         select the maximal  $Q^W$ , join the pair of communities with the maximal  $Q^W$ 
10:        which maximizes the modularity gain  $Q^W$ 
11:        update the  $Q^W$  matrix
12:       end while
13:     end for
14:   end while
15:   if the new modularity is higher than the initial
16:     then
17:        $G_n =$  the network between communities of  $G_n$ 
18:     else
19:       Terminate
20:     end if
21:   until  $Q^W = 0$ .

```
