SCIENTIFIC REP**O**RTS

OPEN

Publisher Correction: Community Detection in Complex Networks via Clique Conductance

Zhenqi Lu[1], Johan Wahlström[2] & Arye Nehorai[1]

Correction to: *Scientific Reports* https://doi.org/10.1038/s41598-018-23932-z, published online 13 April 2018

In Algorithm 1, line 12, the superscripted number 48 should not be present. The correct Algorithm 1 appears below.

Algorithm 1. graph partitioning via clique conductance minimization

---

Input : Adjacency matrix $W \in \{0,1\}^{n \times n}$, number m of clusters to construct
Output : A partition of the network $(A_1, \ldots, A_m)$
1 Compute the maximal cliques from the adjacency matrix W using the Bron-Kerbosch algorithm;
2 Form the clique weight matrix W_c and the corresponding normalized Laplacian matrix $\mathscr{L}_c = D_c^{-1/2}(D_c - W_c)D_c^{-1/2}$;
3 **if** $m = 2$ **then**
4 | Compute the second eigenvector h of $\mathscr{L}_c$;
5 | For $1 \leq i \leq n$, let σ_i be the index of the i-th largest entry of $g = D_c^{-1/2}h$;
6 | Set $A_1 = \arg\min_i \phi(S_i)$, where $S_i = \{v_{\sigma_1}, \ldots, v_{\sigma_i}\}$.
7 **else**
8 | Compute the first m eigenvectors of $\mathscr{L}_c$;
9 | Let $U \in \mathbb{R}^{n \times m}$ be the matrix containing these eigenvectors as columns;
10 | Form T from U by normalizing all columns to norm 1;
11 | For $1 \leq i \leq n$, let $y_i \in \mathbb{R}^m$ be the i-th row of T;
12 | Cluster the points $\{y_i\}_i$ using the k-means algorithm into clusters $C_1, \ldots, C_m$;
13 | For $1 \leq i \leq m$, form cluster $A_i = \{v_j : y_j \in C_i\}$.
14 **end**

---

[1]Preston M. Green Department of Electrical and Systems Engineering, Washington University in St. Louis, St. Louis, MO, USA. [2]Department of Computer Science, University of Oxford, Oxford, United Kingdom. Correspondence and requests for materials should be addressed to A.N. (email: nehorai@wustl.edu)