We thank all reviewers for their efforts towards improving our manuscript. In the following paragraphs, we mainly address the concerns of Reviewer #3.

Comment #1. Give a clear example of forest approximation. The brief paragraph on merging nodes was not very clear.

Response. By definition, the forest approximation of a graph $G$ by a forest $F$ is a mapping from vertices of $G$ to $F$ such that the images of any pair of adjacent vertices are either the same or adjacent.

Recall Figure 2 in our manuscript, which is presented below in Figure 1. $G$ is a cycle of 5 vertices and $F$ is a path of 3 vertices. $\phi$ maps each vertex of $G$ to the vertex of $F$ which has the same shape. Say, vertices 1 and 2 of $G$ are mapped to vertex $u$ of $F$, likewise for the other vertices. We can check that the images of any pair of adjacent vertices of $G$ are either the same or adjacent in $F$. For example, vertices 1 and 2 have the same image $u$, while 3 and 4 are mapped to $v$ and $w$ respectively, which are adjacent in $F$. As a result, $\phi$ is a forest approximation of $G$ by $F$.

![Figure 1: A forest approximation of $C_5$](image-url)