Corrections: Simple-Minded Systems in Stable Module Categories

1. The transitivity problem in Example 3.5 should be formulated as follows:

Given an algebra A and a s.m.s $\mathcal{S}$ over A, is there an algebra B such that there is a stable equivalence between A and B, and that $\mathcal{S}$ is mapped to the simple B-modules under this stable equivalence? In Example 3.5, as Aaron Chan kindly pointed out to us, there is a stable equivalence between A and the following Brauer tree algebra B such that the s.m.s $\mathcal{S}_2$ over A is mapped to simple B-modules:

$$B = \begin{array}{c}1\\2\\1\end{array} \oplus \begin{array}{ccc} & 2 & \\ 1 & & 2 \\ & 2 & \end{array}$$

2. In the proof of Proposition 4.1, the sentence

"Let $\{L_{21}, \cdots, L_{2i_2}\}$ be simple A-modules which correspond to such vertices v_L that v_L is not a sink vertex but is next to a source vertex in the quiver Q."

should be replaced by

"Let $\{L_{21}, \cdots, L_{2i_2}\}$ be simple A-modules which correspond to the source vertices v_L in the new quiver after removing the original source vertices in the quiver Q."

Similarly, the subsequent inductive proof should be revised accordingly.

3. In the proof of Lemma 4.4, the sentence

"By [7, Theorem 4.3], for any such idempotent e_j, Ae_j is projective-injective and $Ae_j/radAe_j$ is isomorphic to the socle of some projective-injective A-module."

should be replaced by

"Any such idempotent e_j satisfies that $Ae_j/radAe_j$ and $soc(e_jA)$ are isomorphic as left A-modules, since $e_j \cdot (Ae_j/radAe_j) \neq 0$ and $e_j \cdot soc(e_jA) \neq 0$."

4. In the proof of Proposition 4.5, the assertion "$e(A) \supseteq e(B)$" does not hold in general, since a node in B may not be a node in the one-point extension A (we thank Xutong Shi for pointing this out). This assertion should be replaced by "$(e(A) - \{\text{nodes of } A\}) \supseteq (e(B) - \{\text{nodes of } B\})$". This fact is only used in *Case 1* to ensure that $\langle \mathcal{S}' \cup e(A) \rangle \supseteq \langle \mathcal{S} \cup e(B) \rangle$.