1139-18-268   **Xiuhua Luo*** (`xiuhualuo@ntu.edu.cn`), 2600 Greenwood Ter Apt G211, Boca Raton, FL 33431, and **Pu Zhang**. *Separated monic representations* **I** : *Gorenstein-projective modules.*

For a finite acyclic quiver Q, an ideal I of a path algebra kQ generated by monomial relations, and a finite-dimensional k-algebra A, we introduce the separated monic representations of a bound quiver (Q, I) over A. They differ from the monic representations. The category $\mathrm{smon}(Q, I, A)$ of the separated monic representations of (Q, I) over A coincides with the category $\mathrm{mon}(Q, I, A)$ of the monic representations if and only if $I = 0$ and each vertex of Q is the ending vertex of at most one arrow. We give properties of the structural maps of separated monic representations, and prove that $\mathrm{smon}(Q, I, A)$ is a resolving subcategory of $\mathrm{rep}(Q, I, A)$. Let $\Lambda := A \otimes_k kQ/I$. By the equivalence $\mathrm{rep}(Q, I, A) \cong \Lambda\text{-mod}$ of categories, the main result claims that a Λ-module is Gorenstein-projective if and only if it is in $\mathrm{smon}(Q, I, A)$ and has a local A-Gorenstein-projective property (G). As consequences, the separated monic Λ-modules are exactly the projective Λ-modules if and only if A is semi-simple; and they are exactly the Gorenstein-projective Λ-modules if and only if A is self-injective, and if and only if $\mathrm{smon}(Q, I, A)$ is a Frobenius category. (Received February 13, 2018)

1