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Some results on the Auslander-Reiten theory of infinite quivers

Let k be a field and Q be a strongly locally finite quiver, that is, Q is a locally finite quiver such that for any pair of vertices x, y , there are finitely many paths from x to y . In a joint work with R. Bautista and S. Liu, we get a complete description of the Auslander-Reiten quiver of $\text{rep}^+(Q)$, the category of the finitely presented representations of Q over k . In this talk, I will discuss these results and extend them to get a partial description of the Auslander-Reiten quiver of the whole category $\text{rep}(Q)$ of the locally finite dimensional representations of Q over k . To this end, I will introduce a full subcategory of $\text{rep}(Q)$ which contains most of the Auslander-Reiten theory of $\text{rep}(Q)$.