Auslander-Reiten theory for simply connected differential graded algebras

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Abstract

Peter Jørgensen introduced the Auslander-Reiten quiver of a simply connected Poincaré duality space. He showed that its components are of the form $\mathbb{Z}A_\infty$ and that the Auslander-Reiten quiver of a d-dimensional sphere consists of $d-1$ such components. In this thesis we show that this is the only case where finitely many components appear. More precisely, we construct families of modules, where for each family, each module lies in a different component. Depending on the cohomology dimensions of the differential graded algebras which appear, this is either a discrete family or an n-parameter family for all n.