
KAVEH MOUSAVAND, Université du Québec à Montréal
Torsion Shadows and Biclosed Sets

Any gentle algebra gives rise to a poset of biclosed sets. For certain choices of algebras A , this poset is isomorphic to the weak order on the symmetric group and the lattice of torsion classes of the preprojective algebra associated to A . Given a gentle algebra A all of whose indecomposable modules are bricks, we introduce an algebra $\Pi(A)$ via a construction analogous to that of the preprojective algebra. We show the poset of biclosed sets of A is isomorphic to the poset of subcategories of $\text{mod } (\Pi(A))$ consisting of torsion classes of $\Pi(A)$ intersected with a particular subcategory of $\text{mod } (\Pi(A))$. We refer to the latter as torsion shadows. This is joint work with A. Garver and T. McConville.