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n-representation-finite Self-injective Algebras (2 Lectures)

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In the classical Auslander-Reiten theory, there is a strong link between representationfinite hereditary and self-injective algebras. In these lectures, I shall explain some recent research seeking to generalise this connection from the point of view of higher-dimensional AR-theory. I will introduce self-injective n-representation-finite algebras, and present a method, generalising the classical one, using which all known instances of self-injective n-representation-finite algebras can be constructed. This includes, in particular, the higher preprojective algebras that are the subject of Herschend's lectures. The question of whether every self-injective n-representation-finite algebra can be constructed in this way is still open.