

# Auslander-Reiten quivers and the Coxeter complex

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Let  $Q$  be a quiver of type  $ADE$ . We present a construction of the associated Auslander-Reiten quiver using the geometry of the hyperplane arrangement of the root system. We get a unified labelling of its vertices ( indecomposables) and arrows (irreducible morphisms) as faces inside the Coxeter complex. The construction uses chamber weights, introduced by Bernstein and Zelevinsky in order to control Lusztig's parametrizations of the canonical basis. Thus it also establishes another link between the theories of finite dimensional algebras and of the canonical basis.