

# QUIVERS AND THEIR REPRESENTATIONS

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## ABSTRACT

Quivers are directed graphs with multiple edges between vertices and loops allowed. The term 'quiver' is used when one refers to the algebraic nature of this object, namely by assigning the category of representations to a quiver. In short terms, a representation of a quiver is an assignment of a vector space to each vertex and a vector space homomorphism between the corresponding vector spaces to each edge. In my talks, I will give an introduction to quiver representations, as well as an overview of various ways of looking at them, including algebraic geometry, symplectic geometry, the theory of finite-dimensional algebras and representation theory of infinite-dimensional Lie algebras.

Prerequisites: Linear algebra, basic homological algebra could be helpful