CLASSIFICATION OF SUB SPACES VIA REPRESENTATION THEORY OF QUIVERS

DAVID SNYDER*

ABSTRACT. We explore how representation theory can be used to classify modules over algebras. Given a system: (V, S, T, M) where v is a vector space of finite dimension with base field $\mathbb{R}$ or $\mathbb{C}$, a nilpotent operator, M, and two invariant subspaces S, T, we will examine how we can break down the system into indecomposables by utilizing the representation theory of quivers.