

# Singularities of orbit closures in module varieties

Grzegorz Zwara

Let  $A$  be a finitely generated associative algebra over an algebraically closed field  $k$ . Let  $d$  be a positive integer. The  $A$ -module structures on  $k^d$  form an affine variety  $\text{mod}(A, d)$  equipped with a natural action of general linear group  $GL(d)$ . We shall discuss problems and results concerning the types of singularities occurring in orbit closures in  $\text{mod}(A, d)$ . Similar problems will be formulated for finite dimensional representations of quivers.