THE FIELDS INSTITUTE

ABSTRACTS 1.2

FOR RESEARCH IN MATHEMATICAL SCIENCES

ANDREW HUBERY University of Leeds

Representations of a quiver with automorphism: generalising a theorem of Kac

A theorem of Kac on quiver representations states that the dimension vectors of indecomposable representations are precisely the positive roots of the associated Kac-Moody Lie algebra. Here we generalise this result to representations respecting an admissible quiver automorphism, and obtain the positive roots of an associated symmetrisable Kac-Moody Lie algebra. There are also close connections with representations of species over finite fields and certain generalised Kac-Moody Lie algebras.