ALGEBRA AND GEOMETRY SEMINAR

Speaker: Charles Paquette (Royal Military College & Queen's University)

Title: The study of bricks in representation theory, and how they arose from cluster algebras

Abstract: In this talk, I will discuss some of the implications that the theory of cluster algebras had in representation theory of finite dimensional algebras. In particular, it led to the study of some particular indecomposable modules. One such family is the set of bricks, where a brick is a module having a division ring as an endomorphism ring. These modules also play a fundamental role in the study of geometric invariant theory for finite dimensional algebras or in the study of torsion theory. Although important objects, there are still many open questions concerning bricks. My plan is to explore a few of those from different perspectives and provide some partial answers.