# Queen's Algebraic Geometry
## — Seminar —

## Faithfulness of Braid Group Actions on Derived Categories

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### Abstract

Inspired by homological mirror symmetry, Paul Seidel and Richard Thomas constructed braid group actions on derived categories of coherent sheaves of various varieties, the simplest examples of which are the minimal resolutions of a Kleinian singularity. In the case of a Kleinian singularity of type A, they showed that the corresponding braid group action is faithful. I will explain an approach to faithfulness by way of Garside structures for braid groups, which gives a uniform proof for arbitrary ADE type. This is based on joint work with Chris Brav, arXiv:0910.2521.

Monday 31 January 2011
16:30 – 17:30
319 Jeffery Hall