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## K-Theory, Quadratic Forms and Number Theory Seminar

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**Dr. Alexander Rahm (NUI Galway)**

will speak on

**Torsion subcomplex reduction and conjugacy classes graphs**

Thu 23rd February 2012 at 4:00PM

Location: Mathematical Sciences Seminar Room (Ag 1.01)

An innovation in the study of arithmetic groups comes with the recently introduced technique of torsion subcomplex reduction. Given a cell complex acted on by an arithmetic group, the torsion subcomplexes are extracted from the quotient space by collecting the cells with elements of a given prime order in their stabiliser. The torsion subcomplexes determine a great deal of the homological torsion of a group. The conjugacy classes graph is constructed purely group-theoretically, without involving any cell complex. We can show that for all the Bianchi groups with units  $\pm 1$ , and all prime numbers, the reduced torsion subcomplex is isomorphic to the conjugacy classes graph. The latter can be computed very efficiently.

This talk is part of the **K-Theory, Quadratic Forms and Number Theory** series. For more, see <https://maths.ucd.ie/seminars>