



## Algebra and Number Theory Seminar

**Title:** Commuting matrices and Higman's conjecture

**Speaker:** Sergey Mozgovoy (TCD)

**Date:** Thu 19th September 2019 at 2:00PM

**Location:** Seminar Room SCN 1.25

**Abstract:** Higman's conjecture states that the number of conjugacy classes in the group of upper triangular matrices over  $F_q$  is polynomial in  $q$ . It can be also formulated as a problem of counting commuting upper triangular matrices over a finite field. I will introduce a generalisation of this problem in terms of quiver representations and prove relations between various counting invariants that arise. In particular, I will show that the original conjecture is equivalent to polynomial-count of certain absolutely indecomposable quiver representations.

[https://maths.ucd.ie/~kazim\\_b/UCDANTseminar.html](https://maths.ucd.ie/~kazim_b/UCDANTseminar.html)