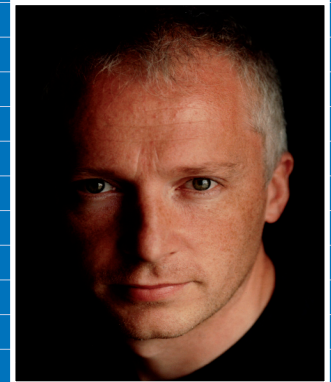![Berlin Mathematical School logo] **Berlin Mathematical School**

BMS Friday Colloquium
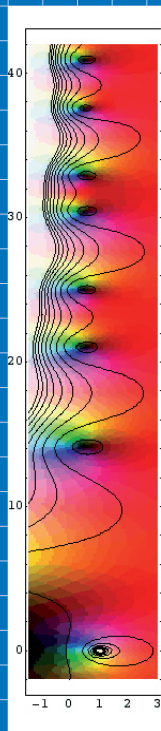
Friday, 21 May 2010, 2:00 pm

Tea before the lecture starts at 1 pm

BMS Loft, Urania
An der Urania 17, 10787 Berlin

Marcus du Sautoy (U Oxford):

"Through the looking glass: groups from a number theoretic perspective"

Ever since Riemann's seminal paper on the primes, the zeta function has proved a powerful weapon in the mathematician's arsenal. In recent years, group theorists have discovered that non-commutative analogues of classical zeta functions in number theory provide an interesting new perspective on the theory of infinite groups. These zeta functions encode in a Dirichlet series arithmetic information about the lattice of subgroups of an infinite group. This lecture will explain how these zeta functions are providing a new bridge between the theory of nilpotent groups and classical arithmetic geometry.