LTCC Proposed Course

Title: Galois Cohomology

Basic Details:
- Core Audience :1st yr, although later parts of the course may also be of interest to 2nd and 3rd years.
- Course Format: 5 x 2hr lectures.

Course Description:
- Keywords: Homological algebra, Galois representations, arithmetic geometry, nonabelian cohomology.
- Syllabus: Group cohomology and nonabelian group cohomology. Continuous cohomology. Brauer groups. The cohomological approach to class field theory. Applications to arithmetic.
- References: Serre, Galois Cohomology. Gille and Szamuely, Central simple algebras and Galois cohomology. Neukirch, Schmidt and Winberg, Cohomology of number fields. Cassels and Frohlich (ed.), Algebraic number theory.

Prerequisites: some algebraic number theory and representation theory. Familiarity with profinite groups is helpful but not essential.

Format: There will be 5 two hour lectures and 4 problem sheets. Lecture notes will be made available at the beginning of the course.

Lecturer Details:
- Lecturer: Netan Dogra
- Lecturer home institution: King's College London
- Lecturer e-mail: netan.dogra@kcl.ac.uk