

LTCC Advanced Course

Title: Landau-Ginzburg Models

Basic Details:

- Core Audience (1styr or 2nd/3rdyr: pure, app. or stats): Pure
- Course Format (**Extended**: 5 x 2hr lectures)

Course Description:

- Keywords: Landau-Ginzburg models, mirror symmetry, algebraic geometry
- Syllabus: The course will start with a primer on mirror symmetry and explain how Landau-Ginzburg models naturally arise as mirrors of certain algebraic varieties. It will then move towards a survey of selected topics for Landau-Ginzburg models and explaining various parts of their theory used in the study of mirror symmetry.
- Recommended reading: None
- Additional Optional reading: arxiv:1503.01757, hep-th/9304045, alg-geom/9402002, 0712.4021, Chapter 2 of Mirror Symmetry and Tropical Geometry by Gross, etc.
- Prerequisites: Algebraic Geometry (Chapter 1 of Hartshorne)

Format:

- No of discussion/problem sheets: 3, no solutions.
- Electronic lecture notes (these are strongly encouraged, as they will form the core of the individual study of the students): I am happy to share my scanned notes for the course, and I will highlight the sections of papers being covered.

Lecturer Details:

- Lecturer: Tyler Kelly
- Lecturer home institution: QMUL
- Lecturer e-mail: t.l.kelly@qmul.ac.uk