

Teaching Experience before 2010

Lectures, Tutorials and Exercise Classes

1. Lectures and tutorials for the second half of “Number Theory”, Birmingham 2009.
2. Lectures and tutorials for the second half of “Number Theory”, Birmingham 2008. For this course I was awarded the Head of School’s Prize for Excellence in Teaching.
3. Lectures and tutorials for the second half of “Number Theory”, lectures “History and Context of Mathematics (Pure Mathematics)”, tutorials “Sequences and Series”, Birmingham 2007.
4. Tutorials “Number Theory” and “Polynomials, rings and metric spaces”, Birmingham 2005.
5. Tutorials and exercise classes in Kiel, Germany (2001-2004):
 - Linear Algebra and Analysis for Physicists,
 - Linear Algebra I, II,
 - Mathematics for first year students,
 - Group Theory I, II.

For 1 and 2: This included lecturing the course, supervising the tutorials and setting class test and exam questions.

For 3: For “Number Theory” this included lecturing the courses, supervising the tutorials, setting exam questions and marking. For the “History and Context” it was my responsibility to choose a suitable topic, to prepare the lectures (including a script), to set exercise and exam questions and to mark the exam.

For 5: During this time I prepared exercises and class tests, marked them and developed a questionnaire to receive anonymous feedback from the students about my courses.

Various

- Since January 2008 I am stand-in supervisor for Paul Flavell’s PhD student.

- For about a year, starting in autumn 2007, I organised a working group with PhD students, considering problems related to recognising groups from the centraliser of an involution.
- In summer 2007 I organised a working group for PhD students about fusion systems. This was to be preparatory for the summer school in Birmingham on the same topic.
- In spring 2007 I was personal tutor for a group of students, replacing Paul Flavell.
- In 2005 and 2006 I taught courses at summer academies for gifted pupils (aged 16-19), together with Lasse Rempe from the University of Liverpool. The courses lasted 18 days, respectively, and the topics were Primality Testing and Cryptography (2005) and Conway Numbers and Games (2006). We dealt with material which is far outside of what is taught in mathematics in schools. It was therefore a challenge to choose a suitable topic and to make it accessible for the participants - in both years this worked out very well. I developed a course concept which combines short presentations (by the participants) with exercise sessions in groups, discussions and reliable feedback routines. The book “Primzahltests für Einsteiger” ([6]) is based on the course in 2005.
- During my visit at the University of Birmingham in autumn 2005 I taught school pupils within a one day mathematics workshop which was organised by the School Liaison Officer Derek Osthus.
- In 2005 I gave a few lectures on spherical buildings during the Summer school on finite groups and related geometrical structures, in Udine, Italy. This was to replace Richard Weiss. The lectures were aimed at advanced undergraduate and postgraduate students and postdocs.