Proseminar Number Theory
(SoSe 2021)

Dozentin: Prof. Dr. Salma Kuhlmann
Homepage: `https://www.mathematik.uni-konstanz.de/kuhlmann/`
E-Mail: `salma.kuhlmann@uni-konstanz.de`

Mitarbeiter

1. Dr. Lothar Sebastian Krapp
   Homepage: `http://www.math.uni-konstanz.de/~krapp/`
   E-Mail: `sebastian.krapp@uni-konstanz.de`
   Skype-Kontakt: live:.cid.ea17ba36b2bc5c1a

2. Michele Serra
   Homepage: `http://www.math.uni-konstanz.de/~serra/`
   E-Mail: `michele.serra@uni-konstanz.de`
   Skype-Kontakt: michele.serra@uni-konstanz.de

Target group

Validation

- Proseminar (BSc) (3 ECTS)

- Fachseminar (BEd, MEd, BSc) (5 ECTS)

Prerequisites

- Linear Algebra (B1 and B2)

- Algebra I (B3)

Language

- English

- German

Content

Aim Deepening the topics covered in the Algebra I (B3) and Algebra II + Algebraic Number Theory (B4) courses as well as complementing them with new related ones and applications.

Each participant will give a **talk**, presenting a specific topic. They will both survey the results from the **literature** and illustrate them with **examples and applications**.

Procedure

1. Each participant will **choose a topic** of their interest. A list of possible topics will be provided, or a participant can suggest a topic of their own, which will be subject to approval by the instructors.

2. Each participant will present their chosen topic through an **oral presentation**. Beforehand they will also produce

   - an **abstract**, where they explain briefly what the main contents of their presentation will be;
   - a **handout** (max. 10 pages), where the content of the talk is covered in detail. The handout will be distributed before the talk and it should help the audience to follow and revise the content.

A personal tutorial will be offered to each participant to help them preparing their talk, discuss questions, suggest improvements.

Schedule

The seminar will meet **Wednesdays, 13:30–15:00** in Room **F426** or online, depending on the current situation.

Course homepage

http://www.math.uni-konstanz.de/~serra/proseminar-zahlentheorie.html

Preliminary meeting

We will hold a preliminary meeting to present further information on literature, possible topics and the general structure of the seminar. This meeting is going to take place on **Friday, 09.04.2021 at 10:00h,** in the following virtual room:
https://bbb.uni-konstanz.de/b/lot-kdt-d74
(Access code: 104811)

Literature

- S. Lang: Algebra

- M. Atiyah, I. MacDonald: Introduction to Commutative Algebra

- A. Leutbecher: Zahlentheorie: Eine Einführung in die Algebra

- I. Stewart, D. Tall: Algebraic Number Theory

- C. Vanden Eynden: Elementary number theory