



universität
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On Cahn-Hilliard equation(s)

In view of its rich dynamics, the Cahn-Hilliard equation boasts huge academic literature and dozens of practical applications. The goal of the course is not to present the most recent results in the field, but rather to get familiar with some concepts/tools that can be used in the study of this and similar problems. In particular, my ambition would be to present some high-level overview of ideas and technical tools one may encounter/need in the study of problems related to Cahn-Hilliard.

The course will be structured as follows: After introducing the model and its components we will explore several variants of the equation and the links/differences between them. We will focus in particular on some non-local variants of the equation. We will then show how to derive the most common uniform estimates used in the study of Cahn-Hilliard type equations. Finally, some applications will be presented.