Bernoullis Tafelrunde

Graduate Student Seminar

Thursday, 23 May 2019, 12:15-13:00
Seminarraum 05.002, Spiegelgasse 5

Yannik Gleichmann

Universität Basel

The Kuzenetsov Lemma for Conservation Laws with Space and Time Dependent Flux

Abstract

Conservation laws are fundamental in our physical world. For example, the conservation law of energy states that the total amount of energy in a system cannot change while time passes by. But it may change its form. In other words: you can neither create nor destroy energy. In this talk, I will give a small introduction to conservation laws and the Kuzenetsov Lemma (with the idea of proof), where the flux also depends explicitly on space and time. The Kuzenetsov Lemma gives an analytical error estimate of the solution to a conservation law to an arbitrary function. This will be used to prove the convergence order for the viscous regularization of conservation laws.