Course: Nonlinear partial differential equations

Teacher(s): Marko Nedeljkov

Course status: elective

ECTS: 12

Prerequisites: Linear PDEs

Goal

Basic techniques of hyperbolic conservation law systems

Outcomes

Understanding of basic analysis of conservattion law systems and solving Riemann and Cauchy problems

Contents

Hyperbolic systems and entropy functionals. Continuum physics models and balance laws. Entropic solutions to Riemann problem, shock waves. Initial data for 1-D systems.

Recommended bibliography

- 1. C.M. Dafermos, Hyperbolic Conservation Laws in Continuum Physics, IV ed, Springer 2009
- 2. A. Bressan, Hyperbolic system of Conservation Laws, Oxford, 2002.

Active teaching hours: 10	Theoretical: 5	Practical: 5
Methods of teaching Lectures and independent work of students		
Knowledge estimation: (max 100 points)		
50 Colloquia 50 Exam		
So conoquia, so Exam		