Seminar announcement

Speaker: prof. Vit Dolejsi, Charles University Prague, CZ

Abstract

The discontinuous Galerkin method (DGM) is a rapidly developed technique for the numerical solution of partial differential equations. DGM exhibits a natural compromise between the finite volume and finite element schemes. It has been intensively studied and developed since 1990. Despite a great progress of the research in this area, DGM is not yet ready for the solution of practical problems of computational fluid dynamics (CFD).

In this talk, we discuss the potential of DGM to became a practically useful technique the solution of CFD problems. Namely, we discuss an efficient solution of the arising algebraic problems, parallelization issues and mesh adaptivity including hp-methods and anisotropic mesh adaptation. We show several numerical examples of steady as well as unsteady flows simulations.

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