Theoretical and computational aspects of the discontinuous Galerkin method

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Short Description

The discontinuous Galerkin (DG) method first proposed by Reed and Hill in 1973 has achieved after 50 years of active research wide acceptance in many application areas and gave rise to a huge variety of numerical schemes. However, the potential of this methodology has not been fully explored yet, and this method still remains a dynamically developing research field. In the focus of our mini-symposium are the recent advances in the theoretical and computational aspects of the DG method. The former include a priori and a posteriori error estimation, adaptive schemes, new discretization approaches, slope limiters, and much more. The computational aspects in connection with the DG method encompass among others new algorithms, use of massively parallel and hybrid computing architectures, new applications.