GTP SEMINAR IMAGe

Discontinous Galerkin Collocation Spectral Element Methods

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Abstract:

A Discontinuous Galerkin Spectral Element framework for solving hyperbolic systems of conservation laws will be presented. Nonlinearity of the governing equations is handled easily by this method through the use of collocation and of discrete orthogonality relationships between the basis functions. Multidimensionality is obtained via tensor products, hence the method can use unstructured hexahedral grids. An application of the method to the solution of the three-dimensional inviscid flow equations (aeroacoustics) will be discussed. Time permitting, issues related to the extension of the method to mixed hyperbolic-parabolic systems such as the Navier-Stokes equations will also be addressed.

Foothills Laboratory 2 Room 1001

Thursday 11 October 2007, 2:30pm
(Refreshments at 2:15)

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