

Local Discontinuous Galerkin Method for Nonlinear Elliptic Problems

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ABSTRACT

By their nature discontinuous Galerkin methods are much more flexible in computing the *hp*-adaptive finite element solutions for wide range of partial differential equations. Local discontinuous Galerkin method is one of the popular discontinuous Galerkin methods for elliptic problems. In this talk, I plan present some results on Local discontinuous Galerkin method for nonlinear elliptic problems of nonmonotone type with main emphasis on the existence and uniqueness of the discrete approximate solution and related *a priori* error estimates. Numerical experiments will be discussed to illustrate the theoretical results.