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**A “natural” norm for the method of characteristics using discontinuous finite elements: 2D and 3D case.** (English) [Zbl 0948.65094](#)

M2AN, Math. Model. Numer. Anal. 33, No. 6, 1223-1240 (1999).

Error estimates for the numerical approximation of a first-order stationary hyperbolic equation in the 2D and 3D case by the method of characteristics using discontinuous finite elements are proved.

Reviewer: [Isaac Yevzerov \(Kyiv\)](#)

**MSC:**

- [65M25](#) Numerical aspects of the method of characteristics for initial value and initial-boundary value problems involving PDEs
- [65M15](#) Error bounds for initial value and initial-boundary value problems involving PDEs
- [65M60](#) Finite element, Rayleigh-Ritz and Galerkin methods for initial value and initial-boundary value problems involving PDEs
- [35L45](#) Initial value problems for first-order hyperbolic systems

Cited in **3** Documents

**Keywords:**

error estimates; first-order stationary hyperbolic equation; method of characteristics; discontinuous finite elements

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