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**Construction of a Roe linearization for the ideal MHD equations. (Construction d'une linéarisée de Roe pour les équations de la MHD idéale.)** (French) [Zbl 0873.76094](#)

C. R. Acad. Sci., Paris, Sér. I 323, No. 8, 951-955 (1996).

Summary: *C. D. Munz* [SIAM J. Numer. Anal. 31, No. 1, 17-42 (1994; [Zbl 0796.76057](#))] has constructed a Roe linearization for the equations of gas dynamics in Lagrangian coordinates. We extend this construction to the case of the ideal magnetohydrodynamics equations again in Lagrangian coordinates. As a consequence, we obtain a Roe linearization for the MHD equations in Eulerian coordinates.

**MSC:**

[76W05](#) Magnetohydrodynamics and electrohydrodynamics

[76M20](#) Finite difference methods applied to problems in fluid mechanics

Cited in **1** Document

**Keywords:**

Lagrangian coordinates; Eulerian coordinates