

**Abgrall, Rémi**

**Approximation of the genuinely multidimensional Riemann problem for the Euler equations by a Roe type method. II: Solution of the approximated Riemann problem. (Approximation du problème de Riemann vraiment multidimensionnel des équations d'Euler par une méthode de type Roe. II: Solution du problème de Riemann approché.)** (French. Abridged English version) [Zbl 0813.76075](#)  
C. R. Acad. Sci., Paris, Sér. I 319, No. 6, 625-629 (1994).

Summary: We are interested in the approximation of the genuinely multidimensional Riemann problem for the Euler equations by a Roe type method. In part I [see the foregoing entry], we had studied how to linearize the Euler equation around an averaged state. Here, we show the existence and unicity of the solution of the approximated Riemann problem, and we compute it.

**MSC:**

**76N10** Existence, uniqueness, and regularity theory for compressible fluids and gas dynamics Cited in **13** Documents  
**76L05** Shock waves and blast waves in fluid mechanics  
**35Q35** PDEs in connection with fluid mechanics

**Keywords:**

existence; unicity