

Optimal Error Estimate of the Penalty Finite Element Method for Micropolar Fluids Equations

ELVA E. ORTEGA-TORRES*

Dpto. de Matemáticas, Univ. de Antofagasta, Casilla 170, Antofagasta-Chile

eortega@uantof.cl

MARKO A. ROJAS-MEDAR⁺

Dpto. de Matemática Aplicada, Univ. Estadual de Campinas, CP 6065, 13083-859, Campinas-SP, Brazil

marko@ime.unicamp.br

Resumen

An optimal error estimate of the numerical velocity, pressure and angular velocity, is proved for the fully discrete penalty finite element method of the micropolar equations, when the parameters ϵ , Δt and h are sufficiently small. In order to obtain above we present the time discretization of the penalty micropolar equation which is based on the backward Euler scheme; the spatial discretization of the time discretized penalty Micropolar equation is based on a finite elements space pair (X_h, M_h) which satisfies some approximate assumption.

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Referencias

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