

Stenberg, Rolf

Some new families of finite elements for the Stokes equations. (English) Zbl 0708.76088
Numer. Math. 56, No. 8, 827-838 (1990).

Summary: We introduce a way of using the mixed finite element families of *P. A. Raviart* and *J. M. Thomas* [Math. Aspects Finite Elem. Mech., Proc. Conf. Rome 1975, Lect. Notes Math. 606, 292-315 (1977; [Zbl 0362.65089](#))] and *J.-C. Nedelec* [Numer. Math. 35, 315-341 (1980; [Zbl 0436.65087](#))], and *F. Brezzi* et al. [e.g. with *J. Douglas*, *R. Durán*, *M. Fortin*, *ibid.* 51, 237-250 (1987; [Zbl 0631.65107](#))], for constructing stable and optimally convergent discretizations for the Stokes problem.

MSC:

[76M10](#) Finite element methods applied to problems in fluid mechanics
[76D07](#) Stokes and related (Oseen, etc.) flows
[65N30](#) Finite element, Rayleigh-Ritz and Galerkin methods for boundary value problems involving PDEs

Cited in **1** Review
Cited in **21** Documents

Keywords:

[mixed finite element families](#); [optimally convergent discretizations](#); [Stokes problem](#)

Full Text: [DOI](#) [EuDML](#)

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