Balasundaram, S.; **Bhattacharyya, P. K.**
A mixed finite-element method for fourth-order elliptic problems with variable coefficients.
(English) Zbl 0647.65075
J. Comput. Appl. Math. 22, No. 1, 1-24 (1988).

The authors describe a mixed finite element method which allows simultaneous approximation of the transverse deflection, the curvature tensor and the bending and twisting moments. Existence and uniqueness theorems together with error estimates are given in the spirit of Brezzi, Ciarlet and Raviart. There are five references given here to papers with virtually the same title by the same authors with much overlapping material. Unfortunately the authors do not point out what is new in the present work nor how it improves on their previous work.

Reviewer: D.R.Westbrook

MSC:

65N30	Finite element, Rayleigh-Ritz and Galerkin methods for boundary value problems involving PDEs	Cited in **2** Documents
65N15	Error bounds for boundary value problems involving PDEs	
74S05	Finite element methods applied to problems in solid mechanics	
35J40	Boundary value problems for higher-order elliptic equations	

Keywords:

mixed finite element method; transverse deflection; curvature tensor; bending and twisting moments; error estimates

Full Text: DOI

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