

CONVERGENCE OF V-CYCLE AND F-CYCLE MULTIGRID METHODS FOR THE BIHARMONIC PROBLEM USING THE MORLEY ELEMENT*

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Abstract. Multigrid V-cycle and F-cycle algorithms for the biharmonic problem using the Morley element are studied in this paper. We show that the contraction numbers can be uniformly improved by increasing the number of smoothing steps.

Key words. multigrid, nonconforming, V-cycle, F-cycle, biharmonic problem, Morley element.

AMS subject classifications. 65N55, 65N30.

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