

A FOUR-NODED PLANE ELASTICITY ELEMENT BASED ON THE SEPARATION OF THE DEFORMATION MODES

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Abstract: *This paper presents a four-noded quadrilateral finite element with translational degrees of freedom for plane elasticity problems, based on the displacement separation method, which is an unsymmetric stress-hybrid formulation. The element can reproduce exactly all the constant strain modes, has correct rank, is of high coarse mesh accuracy and has a very low shape distortion sensitivity.*

Key words: *quadrilateral element, unsymmetric formulation, distortion sensitivity.*