

Relevancy Measures of Errors in Displacements of Finite Elements Analysis Results

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Abstract : This paper highlights the methods of error estimation in finite element analysis (FEA) results. It indicates that the modeling error could be eliminated by performing finite element analysis with successively finer meshes or by extrapolating response predictions from an orderly sequence of relatively low degree of freedom analysis results. In addition, the paper eliminates the round-off error by running the code at a higher precision. The paper provides application in finite element analysis results. It draws a conclusion based on results of application of methods of error estimation.

Keywords : finite element analysis (FEA), discretization error, round-off error, mesh refinement, richardson extrapolation, monotonic convergence

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