

عنوان مقاله:

NURBS-Based analysis of plane elasticity problems

محل انتشار:

نوزدهمین همایش سالانه مهندسی مکانیک (سال: 1390)

تعداد صفحات اصل مقاله: 4

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خلاصه مقاله:

There are a number of candidate computational geometry technologies that may be used in The discretization methods. This approach is based on NURBS1 analysis. The most widely used in engineering design are NURBS. The major strengths of NURBS are that they are convenient for free-form surface modeling, can exactly represent all conic sections, and therefore circles, cylinders, spheres, ellipsoids, etc., and that there exist many efficient and numerically stable algorithms to generate NURBS objects. In this paper the basic steps of NURBS-Based Analysis are explained and numerical examples are given. A 2D MATLAB code for solving plane elasticity on single patch geometries, is presented. The code has a very lean structure and has been kept as simple as possible, such that the analogy but .also the differences to traditional finite element analysis become apparent. It is not intended for large-scale problems

کلمات کلیدی:

NURBS-Based analysis, Finite element, Refinement, MATLAB, Code

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