UNIST | 수리과학과

Mathematical Sciences Colloquium

Introduction to Finite Element Method and Isogeometric Analysis

Professor

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Zoom https://unist-kr.zoom.us/j/87540455917

Host

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Abstract

Isogeometric Analysis (IGA) methodologies are designed to combine two tasks; engineering design by Computer-Aided Design (CAD) and Finite Element Analysis (FEA), so that it is drastically reduced the error in the representation of the computational domain and the re-meshing using the "exact" CAD geometry directly at the coarsest level of discretization. This is achieved by Non-Uniform Rational B-Spline (NURBS) for the geometry description as well as for the representation of the unknown solution fields Furthermore, T-spline has been introduced to alleviate the drawback of the adaptive refinement. In today's talk, we briefly review the conventional FEA and walk through IGA from the scratch and see a variety of numerical examples.

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