

Texas Tech University. Applied Mathematics Seminar.

TRANSFORMING FINITE ELEMENTS

Rob Kirby, Texas Tech University

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Room: MA 108, Time: 4:00pm

ABSTRACT. Typically, finite element codes construct basis functions on a mesh by mapping basis functions from a fixed reference element to each element of the domain. This works very well for classic Lagrange elements and almost no others. In this talk, I will show what goes wrong with "the rest" of the elements, tie this to classic finite element notions such as interpolation equivalence, and show how such approximation-theoretic ideas provide structural information on how to transform "most" elements.