Mathematics > Numerical Analysis

A posteriori error analysis for a continuous space-time finite element method for a hyperbolic integro-differential equation

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An integro-differential equation of hyperbolic type, with mixed boundary conditions, is considered. A continuous space-time finite element method of degree one is formulated. A posteriori error representations based on space-time cells is presented such that it can be used for adaptive strategies based on dual weighted residual methods. A posteriori error estimates based on weighted global projections and local projections are also proved.

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