

## Stability of finite difference schemes for hyperbolic initial boundary value problems II

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**Abstract.** We study the stability of finite difference schemes for hyperbolic initial boundary value problems in one space dimension. Assuming  $\ell^2$ -stability for the discretization of the hyperbolic operator as well as a geometric regularity condition, we show that the uniform Kreiss-Lopatinskii condition yields strong stability for the discretized initial boundary value problem. The present work extends the results of [4,7] to the widest possible class of finite difference schemes by dropping the technical assumptions of our former work [4]. We give some new examples of numerical schemes for which our results apply.

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