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### **Approximation classes for adaptive time-stepping finite element methods**

We study direct estimates for adaptive time-stepping finite element methods for time-dependent partial differential equations. Our results generalize previous findings from “On approximation classes for adaptive time-stepping finite element methods” by Actis et al. (2022), where the approximation error was only measured in  $L_2([0, T], L_2(\Omega))$ . In particular, we now also cover the error norms  $L_\infty([0, T], L_2(\Omega))$  and  $L_2([0, T], H^1(\Omega))$  which are more natural in this context.

This is joint work with Marcelo Actis, Fernando Gaspoz, Pedro Morin, and Cornelia Schneider.