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Numerically stable modular time integration of multiphysical systems. In K.J. Bathe (ed.): Proceedings of the First MIT Conference on Computational Fluid and Solid Mechanics (Cambridge, MA, June 12-15, 2001). - Elsevier, Amsterdam, pp. 1062-1064, 2001.

Abstract. The rapidly increasing computer power allows nowadays the simulation of very complex technical systems. Therefore coupled systems that involve two or more different physical phenomena get more and more important in technical applications. In the present paper we study a class of time integration methods for instationary coupled systems and propose a stabilizing correction term to guarantee numerical stability and convergence.

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