

Operator splitting for distributed delay equations

András Bátkai¹, Petra Csomós², and Bálint Farkas¹

¹ Eötvös University, Budapest, Hungary, E-mail: batka@cs.elte.hu

² University of Innsbruck, Innsbruck, Austria

We provide a general product formula for the solution of nonautonomous abstract delay equations. After having shown the convergence we obtain estimates on the order of convergence for differentiable history functions. Finally, the theoretical results are demonstrated on some typical numerical examples.

- [1] A. Bátkai, P. Csomós, B. Farkas, and G. Nickel, 2011: Operator splitting for nonautonomous evolution equations, *J. Funct. Anal.* **260**, 2163-2190.
- [2] A. Bátkai, P. Csomós, and B. Farkas, 2012: Operator splitting for nonautonomous delay equations, submitted, arXiv:1202.4389.