

Lothar-Collatz-Seminar

Wed, 20. Oct · 4:15 pm · online

Katharina Klioba (TUHH)

Approximating Evolution Equations with Random Coefficients

Abstract:

Solving evolution equations with random coefficients numerically requires discretizing in space, time and of random parameters. As numerical methods for all three discretisations are well-known, it is natural to ask under which conditions they can be combined. In this talk, we discuss this question with a special emphasis on preservation of strong convergence rates.

A common approach to spatial discretization consists of solving the weak formulation on finite-dimensional approximating spaces. We present a novel quantified version of the Trotter-Kato theorem in this setting, yielding rates of strong convergence under a joint condition on properties of the corresponding form and the approximating spaces.

This is joint work with Christian Seifert (TUHH).

For further information please contact

Dr. Claus Goetz (claus.goetz@uni-hamburg.de), or visit
www.c3s.uni-hamburg.de/news-events/seminar-c3s.html