Numerical methods for advection-diffusion-reaction equations (W. Hundsdorfer & J. Verwer)

Willem Hundsdorfer
Willem.Hundsdorfer@cwi.nl
CWI, The Netherlands

Abstract

Advection-diffusion-reaction equations are the most common type of partial differential equations, and efficient numerical solution of such problems is of major importance in many applications. Although computer capacities are rapidly expanding, the size of the problems that are to be solved in practice easily keeps pace.

The construction and analysis of numerical techniques is therefore an active field of research. In this minisymposium several aspects are considered to solve time-dependent problems. These will include splitting methods, combined implicit-explicit time stepping and the incorporation of Krylov techniques.