T^4 Conference

Splitting methods Section

(May 24-25, 2012)

http://theop11.chem.elte.hu/T4

Plenary lectures:

Zahari Zlatev (NERI, Roskilde, Denmark)
Mathematical background of a large-scale environmental model

Nurcan Gücüyenen (IIT, Izmir, Turkey)
Iterative operator splitting method for capillary formation model in tumor angiogenesis problem: analysis and application

Tamás Szabó (BCAM, Bilbao, Spain)
An IMEX scheme combined with Richardson extrapolation for reaction-diffusion equations

Workshop:

Splitting methods: theory and applications

(organizer: István Faragó)

Location: TBA
15 minute lectures + 5 minutes for questions

24 May, Thursday

14:30 Zahari Zlatev (NERI, Roskilde, Denmark)
Studying stability properties of the Richardson Extrapolation

14:50 Brigitta Brajnovits (ZAMG, Vienna, Austria)
Numerical analysis of the Richardson extrapolation in simplified environmental models

15:10 Imre Fekete (ELTE, Budapest, Hungary)
Some nonlinear stability notions in numerical analysis

15:30 Tamás Ladics (BME, Budapest, Hungary)
Generalizations and error analysis of the iterative operator splitting method

15:50 break

16:00 Fanni Kelemen (ELTE, Budapest, Hungary)
Sensitivity analysis of meteorological models with the adjoint method

16:20 Attila Nagy (ELTE, Budapest, Hungary)
Influence of the discrete boundary conditions in simplified mathematical models compared to a complex meteorological model

16:40 Boglárka Gnandt (VITUKI, Budapest, Hungary)
Evaporation estimation in the HHFS hydrological forecasting model

25 May, Friday

14:30 Róbert Horváth (BME, Budapest, Hungary)
Solution of the Maxwell equations with splitting

14:50 János Karátson (ELTE, Budapest, Hungary)
Decoupled operator preconditioning for the numerical solution of nonlinear convection-reaction-diffusion systems

15:10 Balázs Kovács (ELTE, Budapest, Hungary)
Variable preconditioning in complex Hilbert space and its application to the nonlinear Schrödinger equation

15:30 break

15:45 Péter Simon (ELTE, Budapest, Hungary)
Differential equation approximation of network processes

16:05 Gábor Csörgő (ELTE, Budapest, Hungary)
Bifurcations in a model of electrochemical reactions in fuel cells

16:25 András Bátkai (ELTE, Budapest, Hungary)
Operator splitting for distributed delay equations

16:45 Discussions