

## Doctoral theses

### Department of Computer Sciences

- [1] O. B. WIDLUND, *Studies on Parabolic and Alternating-Direction-Implicit Difference Schemes*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, October 1966. (H.-O. Kreiss)
- [2] E. SANDEWALL, *Question-answering and problem-solving techniques*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, May 1969. (Computing Science)
- [3] A. SJÖBERG, *An existence proof and a numerical procedure for the Korteweg-de Vries equation*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, November 1969. (H.-O. Kreiss)
- [4] M. Y. T. APELKANS, *Studies on Difference Schemes for Hyperbolic Equations*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, December 1969. (H.-O. Kreiss)
- [5] B. GUSTAFSSON, *On Difference Approximations to Hyperbolic Differential Equations*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, February 1971. (H.-O. Kreiss)
- [6] T. ELVIUS, *Numerical Solution of a Problem in Potential Theory using Integral Equations*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, May 1971. (H.-O. Kreiss)
- [7] B. FORNBERG, *On the Numerical Solution of Hyperbolic Differential Equations*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, May 1972. (H.-O. Kreiss)
- [8] J. OLIGER, *On Difference Methods for Hyperbolic Differential Equations*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, March 1973. (H.-O. Kreiss)
- [9] B. ENGQUIST, *On Difference Approximations to Differential Equations*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, October 1975. (H.-O. Kreiss)
- [10] L. ABRAHAMSSON, *On Difference Approximations for Singular Perturbations of Ordinary Differential Equations*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, January 1976. (H.-O. Kreiss)
- [11] G. SKÖLLERMO, *Some contributions to the numerical solution of partial differential equations: Fourier techniques in theory and practice*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, January 1976. (H.-O. Kreiss)

- [12] M. NORDSTRÖM, *A method for defining formal semantics of programming languages applied to Simula*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, June 1976. (E. Sandewall, Computing Science)
- [13] G. STARIUS, *On difference approximations to partial differential equations on irregular regions*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, November 1976. (H.-O. Kreiss)
- [14] J. HOLMQUIST, *On Analysis Methods and Software Design for Computer Processing of Digitized Microscopic Cell Images*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, May 1977. (B. Stenkvist, Computerized Image Analysis)
- [15] G. SCHERER, *On energy estimates for difference approximations to hyperbolic partial differential equations*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, October 1977. (H.-O. Kreiss)
- [16] P. WAHLUND, *On well-posedness for partial differential equations: A numerical method for the blunt body problem*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, May 1978. (H.-O. Kreiss)
- [17] J. M. S. PREWITT, *On some Applications of Pattern Recognition and Image Processing to Cytology, Cytogenetics, and Histology*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, May 1978. (B. Stenkvist, Computerized Image Analysis)
- [18] T. SMEDSAAS, *Methods for automatic generation of computer programs for solving partial differential equations*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, March 1979. (B. Engquist)
- [19] O. ERIKSSON, *Construction of Interactive Software Systems for Image Processing with Applications to Automated Cytology*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, March 1982. (E. Bengtsson, Computerized Image Analysis)
- [20] M. THUNÉ, *IBSTAB—A Software System for Automatic Stability Analysis of Difference Methods for Hyperbolic Initial-Boundary Value Problems*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, March 1984. (B. Gustafsson)
- [21] L.-E. ERIKSSON, *Transfinite Mesh Generation and Computer-Aided Analysis of Mesh Effects*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, March 1984. (B. Gustafsson)

- [22] L. FERM, *Numerical methods for inviscid flow with open boundaries*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, May 1984. (B. Gustafsson)
- [23] J. GUERRA, *Numerical methods for hyperbolic problems with different time scales*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, May 1984. (B. Gustafsson)
- [24] Q. Q. HUYNH, *Iterative methods for advection-dominated flow problems*, Ph.D. thesis, Dept. of Computer Sciences, Uppsala Univ., Uppsala, Sweden, February 1987. (B. Engquist)

**Department of Scientific Computing**

- [25] B. SJÖGREEN, *Efficient Computation of Shock Wave Solutions to Hyperbolic Conservation Laws*, Ph.D. thesis, Dept. of Scientific Computing, Uppsala Univ., Uppsala, Sweden, May 1988. (B. Engquist)
- [26] L. EGNESUND, *The shallow-water equations in a water-course with sloping shores extended with an artificial water domain*, Ph.D. thesis, Dept. of Scientific Computing, Uppsala Univ., Uppsala, Sweden, November 1989. (B. Gustafsson)
- [27] H. STOOR, *Numerical solution of the Navier–Stokes equations for small Mach numbers*, Ph.D. thesis, Dept. of Scientific Computing, Uppsala Univ., Uppsala, Sweden, April 1990. (B. Gustafsson)
- [28] C. JOHANSSON, *Initial-Boundary Value Problems for Incompressible Fluid Flow*, Ph.D. thesis, Dept. of Scientific Computing, Uppsala Univ., Uppsala, Sweden, March 1991. (B. Gustafsson)
- [29] R. ENANDER, *Grid patching and residual smoothing for computations of steady state solutions of first order hyperbolic systems*, Ph.D. thesis, Dept. of Scientific Computing, Uppsala Univ., Uppsala, Sweden, October 1991. (B. Gustafsson)