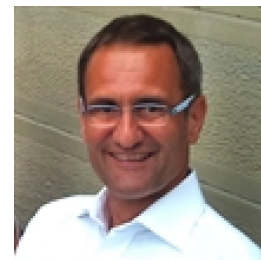


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## Short CV - system generated

A full CV is available on request.

## Accademic degrees

2001	Docent from Lund University, Sweden
1999	Habilitation and "venia legendi" from RWTH-Aachen, Germany
1993	Doctorate in mathematics from ETH-Zürich, Switzerland
1987	Diploma in mathematics from Universität Konstanz, Germany

## Employment history

2009-present	Professor of Applied Mathematics, University of Southern Denmark
2009-2010	Professor of Mathematics, Lund University
2007-2008	Researcher, Simula Research Laboratory, Oslo
2000-2009	Universitetslektor, Center for Mathematical Science, Lund University
1999-2000	Førsteamanuensis, Department for Mathematical Sciences, NTNU- Trondheim
1994-2000	Wissenschaftlicher Assistent, Numerische Mathematik, RWTH-Aachen
1993-1994	Postdoctoral Fellow, Institute for Informatics, University of Oslo
1990-1993	Assistant, Seminar for Applied Mathematics, ETH-Zürich

## Publications

### An adaptive E-scheme for conservation laws

Abdi, E. A., Hansen, C. V. & Schroll, H. J., 1. Jan 2019, *Numerical Mathematics and Advanced Applications ENUMATH 2017*. Radu, F. A., Kumar, K., Berre, I., Nordbotten, J. M. & Pop, I. S. (eds.). Switzerland: Springer VS, Vol. 126. p. 379-387 (Lecture Notes in Computational Science and Engineering, Vol. 126).

### A discontinuous Galerkin model for fluorescence loss in photobleaching of intracellular polyglutamine protein aggregates

Lorenzen, C. V., Schroll, A. & Wüstner, D., 29. Nov 2018, In : *B M C Biophysics*. 11, 14 p., 7.

### A Discontinuous Galerkin Model for Fluorescence Loss in Photobleaching

Hansen, C. V., Schroll, A. & Wüstner, D., 23. Jan 2018, In : *Scientific Reports*. 8, 13 p., 1387.

### Computational Modeling of Fluorescence Loss in Photobleaching

Hansen, C. V., Schroll, A. & Wüstner, D., Aug 2015, In : *Computing and Visualization in Science*. 17, 4, p. 151-166

### Quantitative fluorescence loss in photobleaching for analysis of protein transport and aggregation

Wüstner, D., Solanko, L. M., Lund, F. W., Sage, D., Schroll, A. & Lomholt, M. A., 2012, In : *B M C Bioinformatics*. 13, p. 296

### Automatic Calibration of Depositional Models

Schroll, A., 2011, *Automated Solution of Differential Equations by the Finite Element Method: The FEniCS Book*. Logg, A., Mardal, K-A. & Wells, G. N. (eds.). Springer

**On the Accuracy of Operator Splitting for the Monodomain Model of Electrophysiology**

Schroll, A., Lines, G. T. & Tveito, A., 2007, In : *International Journal of Computer Mathematics*. 84, 6, p. 871--885

**A bi-hyperbolic finite volume method on quadrilateral meshes**

Schroll, A. & Svensson, F., 2006, In : *Journal of Computer Science*. 26, 2, p. 237--260

**Limiters-free third order logarithmic reconstruction**

Artebrant, R. & Schroll, A., 2006, In : *SIAM Journal on Scientific Computing*. 28, 1, p. 359--381

**Logarithmic Reconstructions**

Artebrant, R. & Schroll, A., 2006, *Hyperbolic Problems: Theory, Numerics, Applications*. Yokohama Publishers, p. 271--278

**Numerical simulation of Camassa-Holm peakons by adaptive upwinding**

Artebrant, R. & Schroll, A., 2006, In : *Applied Numerical Mathematics*. 56, 5, p. 695--711

**Conservative logarithmic reconstructions and finite volume methods**

Artebrant, R. & Schroll, A., 2005, In : *SIAM Journal on Scientific Computing*. 27, 1, p. 294--314

**High-Resolution Simulation of Inviscid Flow in General Domains**

Hall, O., Schroll, A. & Svensson, F., 2005, In : *International Journal for Numerical Methods in Fluids*. 47, 10-11, p. 1061--1067

**Relaxed High Resolution Schemes for Hyperbolic Conservation Laws**

Schroll, A., 2004, In : *J. Sci. Comp.* 21, 2, p. 251--279

**High-Resolution Riemann-Solver-Free Methods for Conservation Laws**

Artebrant, R. & Schroll, A., 2003, *Hyperbolic Problems: Theory, Numerics, Applications*. p. 305--314

**High resolution relaxed upwind schemes in gas dynamics**

Schroll, A., 2002, In : *J. Sci. Comp.* 17, 1-4, p. 599--607

**Hyperbolic Systems with Relaxation and Applications to Reservoir Simulation**

Schroll, A., 2002, KFS AB.

**Error estimates for Godunov-type schemes in the presence of source terms**

Schroll, A., 2001, *Godunov Methods*. Kluwer Academic Publishers, p. 815--821

**Local existence and stability for a hyperbolic-elliptic system modeling two-phase reservoir flow**

Schroll, A. & Tveito, A., 2000, In : *Electronic Journal of Differential Equations*. 2000, 4, p. 1--28

**Hyperbolic systems with relaxation: characterization of stiff well-posedness and asymptotic expansions**

Schroll, A. & Lorenz, J., 1999, In : *Journal of Mathematical Analysis and Applications*. 235, 2, p. 497--532

**Hyperbolic systems with relaxation: symmetrizers and entropies**

Schroll, A. & Lorenz, J., 1999, *Hyperbolic problems: theory, numerics, applications. Vol. II / Internat. Ser. Numer. Math.* 130. Birkhäuser Verlag, p. 823--832

**Review: "Partial Differential Equations: A Computational Approach" by Aslak Tveito and Ragnar Winther**

Schroll, A., 1999

**Models of two-phase porous medium flow**

Schroll, A., 1998, *Z. Angew. Math. Mech.*, Wiley-VCH, p. S1063--S1064

**An L1-error bound for a semi-implicit difference scheme applied to a stiff system of conservation laws**

Schroll, A., Tveito, A. & Winther, R., 1997, In : *SIAM Journal on Numerical Analysis*. 34, 3, p. 1152--1166

**Stiff well-posedness for hyperbolic systems with large relaxation terms (linear constant-coefficient problems)**

Schroll, A. & Lorenz, J., 1997, In : *Advances in Differential Equations*. 2, 4, p. 643--666

**Well-Posedness of Stiff Hyperbolic Systems**

Lorenz, J. & Schroll, A., 1997, *Numerical Modelling in Continuum Mechanics*. matfyz press, p. 384--391

**A system of conservation laws with a relaxation term**

Schroll, A., Tveito, A. & Winther, R., 1996, *Hyperbolic problems: theory, numerics, applications*. World Sci. Publ, p. 431--439

**Compact difference methods applied to initial-boundary value problems for mixed systems.**

Bodenmann, R. & Schroll, A., 1996, In : *Numerische Mathematik*. 73, 3, p. 291--309

**Convergence of implicit finite difference methods applied to nonlinear mixed systems**

Schroll, A., 1996, In : *SIAM Journal on Numerical Analysis*. 33, 3, p. 997--1013

**Finite-difference schemes for scalar conservation laws with source terms.**

Schroll, A. & Winther, R., 1996, In : *IMA Journal of Numerical Analysis*. 16, 2, p. 201--215

**Outline of a convergence proof for compact difference methods applied to nonlinear initial-boundary value problems.**

Bodenmann, R. & Schroll, A., 1996, *Z. Angew. Math. Mech.*, AKADEMIE VERLAG GMBH, p. 359--360