

## PUBLICATIONS

### **A Publications in Scientific Journals:**

1. Integration of Iterated Integrals by Multistep Methods, Numer. Math. 21, 303-316, 1975.
2. Stability of Quadrature Rules for First Kind Volterra Integral Equations, BIT 14, 144-151, 1974, jointly with C.J. Gladwin.
3. Stiff Stability and its Relation to A0- and A(0)-stability, SIAM J. on Numer. Anal. 13. 8-17, 1976.
4. A Necessary Condition for A-stability of Multistep Multiderivative Methods, Math. Comp. 30, 739-746, 1976.
5. Note on A-stability of Multistep Multiderivative Methods, BIT 16, 74-78, 1976.
6. Multistep Methods Using Higher Derivatives and Damping at Infinity, Math. Comp. 31, 124-138 and 4 microfiches, 1977.
7. Stiff Stability of Multistep Multiderivative Methods, SIAM J. on Numer. Anal. 14, 760-772, 1977.
8. A0-stability of Brown's Multistep Multiderivative Methods, Numer.Math. 32, 167-181, 1979. (This is a shortened version of proceedings contribution B 2)
9. On the Stability Properties of Brown's Multistep Multiderivative Methods, Numer. Math. 30, 25-38, 1978, jointly with L. Kratz.
10. Complete Characterization of Multistep Methods With an Interval of Periodicity for Solving  $y''=f(x,y)$ , Math. Comp. 32, 1108-1114, 1978.
11. Corrigendum to 'Stiff Stability of Multistep Multiderivative Methods', SIAM J. on Numer. Anal. 16, 339-345, 1979.
12. Stability on the Imaginary Axis and A-stability of Linear Multistep Methods, BIT 18, 170-174, 1978.
13. An Algebraic Test for A0-stability, BIT 18, 402-414, 1978, jointly with A. Friedli.
14. Largest Disk of Stability of Explicit Runge-Kutta Methods, BIT 18, 500-502, 1978, jointly with O. Nevanlinna.
15. An Optimal Fraction Free Routh Array, International Journal of Control 30, 653-660, 1979.
16. Stability of Explicit Time Discretizations for Solving Initial Value Problems, Numer. Math. 37, 61-91, 1981, jointly with O. Nevanlinna.

17. Stability and Accuracy of Time Discretizations for Initial Value Problems, Numer. Math. 40, 245-296, 1982, jointly with O. Nevanlinna. (Shortened version of report C 2)
18. Stability of Semidiscretizations of Hyperbolic Problems, SIAM J. on Numer. Anal. 20. 1210-1218, 1983, jointly with O. Nevanlinna.
19. Dahlquist's First Barrier for Multistage Multistep Formulas, BIT 24, 538-555, 1984, jointly with O. Nevanlinna.
20. Stability and Accuracy of Difference Schemes for Hyperbolic Problems, J. CAM 12&13, 1985, 91-108.
21. Accuracy Bounds for Semidiscretizations of Hyperbolic Problems, Math Comp. 45, 1985, 365-376, jointly with K.- G. Strack.
22. Accuracy and Stability of Multistage Multistep Formulas, Numer. Math. 48, 1986, 33-83.
23. A Proof of the Barrier for Upwind Schemes by Dahlquist's Second Barrier, J. CAM 15, 1986, 257-259.
24. Convergence Analysis of Discretization Methods for Nonlinear First Kind Volterra Integral Equations, Numer. Math. 49, 1986, 67 - 80, and Report of the Oxford University Computing Laboratory, Numerical Analysis Group, 1985. Jointly with J. Dixon and S. McKee.
25. Error Bounds Revisited, BIT 26, 1986, 505 - 520, and Math. Inst. Report - HTKK-Mat-A232, 1985. Jointly with O. Nevanlinna.
26. Accuracy Barriers of Difference Schemes for Hyperbolic Equations, SIAM J. Numer. Anal. 24, 1987, 1-11. Jointly with J.H. Smit.
27. Counter Examples to an Order Barrier for Stable Multistep Discretizations of Linear Hyperbolic Equations, Numer. Math. 52, 1988, 301 - 316. Jointly with P. Kiani and K. Raczek.
28. Nonexpansive Prolongations and Difference Schemes for the Advection Equation, Mitteilungen aus dem Mathem. Seminar Giessen, Heft **203**, 17-28, 1991. Jointly with O. Nevanlinna
29. Stability of a family of multi-time-level difference schemes for the advection equation, Numer. Math., **60**, 77-95, 1991, jointly with P. Kiani.
30. Barriers to the accuracy of explicit three time level difference schemes for hyperbolic equations, Annals of the University of Stellenbosch, 1992/2, 1-34, jointly with J.H. Smit
31. Stagnation point computations of nonequilibrium inviscid blunt body flow, Computers Fluids Vol 22, 501-515, 1993, jointly with M. Fey, S. Müller.

32. Computation of viscous hypersonic non-equilibrium blunt body flow, *Z. Flugwiss. Weltraumforsch.* **17**, 125 - 130, 1993. Jointly with S. Müller, Ch. Dickopp, J. Ballmann.
33. Waveform relaxation with overlapping splittings, *SIAM J. on Sci. Comp.*, Vol. 16, No.1, pp.40-49, January 1995. Jointly with B. Pohl.
34. The maximal accuracy of stable difference schemes for the wave equation. *BIT* **35**, 83-115, 1995. Jointly with R. A. Renaut, J. H. Smit.
35. A numerical method for unsteady flows. *Applications of Mathematics*, **40**, 175-201, 1995. Jointly with N. Botta.
36. A higher-order boundary treatment for Cartesian-grid methods. *J. of Comp. Physics*, **140**, 259-277, 1998. Jointly with H. Forrer.
37. An accuracy barrier for stable three-time-level difference schemes for hyperbolic equations. *IMA J. of Numerical Analysis*, **18**, 445-484, 1998. Jointly with R. A. Renaut, J. H. Smit.
38. Error estimators for the position of discontinuities in hyperbolic conservation laws with source terms which are solved using operator splitting, *Computing and Visualization in Science*, **1**, 231 - 249, 1999. Jointly with P. Klingenstein.
39. A numerical method for inverse design based on the inverse Euler equations. *Int. J. Numer. Meth. Fluids*, **41**, 339-355, 2003. Jointly with A. Scascighini, A. Troxler.
40. Reducibility and contractivity of Runge-Kutta methods revisited. *BIT***46**, no. 3, 567–587. 2006. Jointly with Germund Dahlquist.
41. On curl-preserving finite volume discretizations for shallow water equations. *BIT***46**, 2006 suppl., S35–S53. Jointly with M. Torrilhon.
42. Essentially optimal explicit Runge-Kutta methods with application to hyperbolic-parabolic equations. *Numer. Math.* **106**, 2007, no. 2, 303–334. Jointly with Manuel Torrilhon.

## **B Publications in Proceedings**

1. Multistep Multiderivative Methods and Hermite-Birkhoff Interpolation, in *Congressus Numerantium XVI*, Proceedings of the 5th Conference on Numerical Mathematics, 1975, 417-428, 1976.
2.  $A_0$ -stability of Brown's Multistep Multiderivative Methods, ARO-Report 77-3, Proceedings of the 1977 Army Numerical Analysis and Computers Conference, 565-581, 1977.
3. On the Stability Regions of Multistep Multiderivative Methods, in: *Numerical Treatment of Differential Equations*, Proceedings, Oberwolfach, 1976, Lecture Notes in Mathematics, 631, 63-80, Springer 1978.

4. Lower Bounds for the Accuracy of Linear Multistep Methods, Proceedings of the International Workshop on 'Numerical Integration of Differential Equations', Springer Lecture Notes in Mathematics 968, 280-291, 1982, jointly with O. Nevanlinna.
5. Über das Erhöhen der Fehlerordnung von Mehrschrittverfahren zum Lösen von Anfangswertproblemen, ZAMM 62, T 332 - T 334, 1982, jointly with O. Nevanlinna.
6. Stability and Accuracy of Time Discretizations for Initial Value Problems, in Proceedings of the Oberwolfach Meeting " Numerical Methods for Solving Stiff Initial Value Problems", Ed. G.Dahlquist, R. Jeltsch, Report Nr. 9 of the Inst. for Geometry and practical Mathematics, RWTH Aachen, 59-64, 1981. (Research announcement of report C 2)
7. A Technique to Compare Stability Regions of General Linear Methods With Special Applications to Semidiscretizations of Hyperbolic Problems, in Conferentie Van Numeriek Wiskundigen, Zeist, 1981, 8 - 20, jointly with O. Nevanlinna.
8. Genauigkeit stabiler Approximationen für Erhaltungssätze, 64, T 285 - T 286, 1984, jointly with K.-G. Strack.
9. Analysis of Time Discretizations, Proceedings of the VII Congreso de Ecuaciones Diferenciales and Aplicaciones, Granada, 1984, Ed. J. K. Hale, P. Martinez-Amores, Pitman, 114-154, 1985, jointly with O. Nevanlinna.
10. Bounds for the Accuracy of Difference Methods for Hyperbolic Differential Equations, in Proceedings of the Third Seminar in Halle on 'Numerical Treatment of Differential Equations' held 1985, ed. K. Strehmel, Teubner Texte zur Mathematik, Teubner, Leipzig, 1986, 80-88, jointly with J.H. Smit.
11. Die diskrete Entropiebedingung, Proceedings des Kolloquiums des Sonderforschungsbereichs 27 über 'Wellenfokussierung', July 3 - 4, 1985, Institute of Technology RWTH Aachen, 1986, jointly with K.-G. Strack.
12. Shifted Runge-Kutta Methods and Transplanted Differential Equations, in Numerical Treatment of Differential Equations, Proceedings of the Fourth Seminar held in Halle, 1987, ed. K. Strehmel, Teubner Leipzig, 1988, jointly with G. Dahlquist.
13. Order Barriers for Difference Schemes for Linear and Nonlinear Hyperbolic Problems, Proceedings of the 1987 Conference on Numerical Analysis at the University of Dundee, ed. D.F. Griffith, G.A. Watson; Pitman Res. Notes Math. Ser. 170, 157-175, 1988.
14. Convergence and stability of multi time level schemes for the linear advection equation, in 'Finite Approximations in Fluid Mechanics II', Notes on Numerical Fluid Mechanics, Vieweg Verlag, 1989, Jointly with Böing, P. Kiani.

15. On the interaction of Euler and ODE solver when computing reactive gas flow, Proceedings of the workshop on 'Adaptive Methods for Partial Differential Equations', ed. J.E. Flaherty, P.J. Paslow, M.S. Shephard, J.D. Vasilakis, SIAM, 1988. Jointly with M. Fey, H. Jarausch, P. Karmann.
16. Accuracy Barriers of Three Time Level Difference Schemes for Hyperbolic Equations, Proceedings of the 3rd International Conference on Hyperbolic Problems, held in Uppsala, June 11-15, 1990, Chartwell-Bratt, 1991, 611-627, Jointly with J.H. Smit.
17. Numerical Analysis of Chemically Reacting Inviscid Flow in 2-D, To appear in Workshop on Hypersonic Flows for Reentry Problems, Part I, Jan. 22 - 25, 1990. ed. Desideri J.A., Periaux J., Springer, 1991. Jointly with M. Fey, P. Karmann.
18. Properties of discrete hyperbolic conservation laws, in Computational Ordinary Differential Equations, ed. S.O. Fatunla, University Press PLC, Ibadan, 1992, 117-140.
19. Influence of numerical diffusion in high temperature flow, in Proceedings of the 9th GAMM Conference on Numerical Methods in Fluid Mechanics held in Lausanne, Sept. 25 - 27, 1991. ed. Rhyming, Notes on Numerical Fluid Mechanics, Vieweg Verlag. Jointly with M. Fey.
20. A simple Multidimensional Euler Scheme, in Proceedings of the 1st European Computational Fluid Dynamics Conference held in Brussels, Sept. 7 - 11, 1992, Elsevier Science Publishers, 1992. Jointly with M. Fey.
21. Finite Volume Methods for solving the unsteady Euler Equations with Chemical Reactions, Proceedings of the International Congress on Numerical Methods in Engineering and Applied Sciences, Concepcion, Chile, 16.-20.11.1992, CIMNE, Barcelona, 1992, eds. H. Alder, J.C. Heinrich, S. Lavanchy, E. Onate, B. Suarez, pp. 168-180. Jointly with M. Fey, S. Müller.
22. Properties of Discrete Hyperbolic Computational Ordinary Conservation Laws Differential Equations, ed. S.O. Fatunla, University Press PLC, Ibadan, 1992, pp. 117-140.
23. A new multidimensional Euler-scheme, In A. Donato and F. Oliveri (Editoren), Nonlinear Hyperbolic Problems: Theoretical, Applied and Computational Aspects, Notes on Numerical Fluid Mechanics, **43**, 227-234. Vieweg Verlag, 1993. Jointly with M. Fey.
24. The influence of a source term, an example: chemically reacting hypersonic flow, In A. Donato and F. Oliveri (Editoren), Nonlinear Hyperbolic Problems: Theoretical, Applied and Computational Aspects, Notes on Numerical Fluid Mechanics, **43**, 235-245. Vieweg Verlag, 1993. Jointly with M. Fey, S. Müller.
25. Multidimensional schemes for nonlinear systems of hyperbolic conservation laws, Proceedings of the 1995 Conference on Numerical Analysis at the University of

- Dundee, ed. D. F. Griffith, G. A. Watson; Pitman Research Notes Math. Ser. 1996, 19-35. Jointly M. Fey, A.-T. Morel.
26. On the Courant-Friedrichs- Lewy Condition Equipped with Order for Hyperbolic Differential Equations, in Proceedings of the Fifth International Conference on Hyperbolic Problems: Theory, Numerics, Applications; Editors: J. Glimm, M.J. Graham, J.W. Grove & B.J. Plohr, World Scientific, Singapore, 1996, 30 - 42. Jointly with Rosemary A. Renaut
  27. Stability of time discretizations, Hurwitz determinants and order stars, in Stability Theory, Hurwitz Centenary Conference, Centro Stefano Franscini, Ascona, 1995; Editors: R. Jeltsch, M. Mansour, ISNM vol. 121, Birkhäuser, Basel, 1996, 191-204.
  28. Order barrier due to stability for full discretizations of the advection equation, Open Problems in Stability Theory, Hurwitz Centenary Conference, Centro Stefano Franscini, Ascona, 1995; Editors: R. Jeltsch, M. Mansour, ISNM vol. 121, Birkhäuser, Basel, 1996, 234-235.
  29. The method of transport, a multidimensional scheme to solve nonlinear systems of hyperbolic conservation laws, Book of abstract of the Symposium: Godunov's Method for Gas Dynamics: Current Applications and Future Developments held in Ann Arbor, May 1-2, 1997, pp 7. Jointly with M. Fey.
  30. Inverse design of an axis-symmetric diffuser. Progress in industrial mathematics at ECMI 2000 (Palermo), 641–645, Math. Ind., 1, Springer, Berlin, 2002. Jointly with A. Scascighini; A. Troxler.
  31. State of the art simulations of high intense particle beams in complicated accelerator structures, Progress in industrial mathematics at ECMI 2000, (Palermo), 28–41, Math. Ind., 1, Springer, Berlin 2000. Jointly with A. Adelman
  32. A high-resolution scheme for the elastic-plastic wave equation, Proceedings of Hyperbolic problems: theory, numerics, applications: eight international conference in Magdeburg, February, March 2000 / ed. by Heinrich Freistühler; Gerald Warnecke. Basel; Boston; Berlin: Birkhäuser ISBN 3-7643-6711-3 (Set) Vol. 1. - (2001) (International series of numerical mathematics; Vol. 140) ISBN 3-7643-6709-1, 425-433, jointly with G. Giese
  33. CSE program at ETH Zurich: Are we doing the right thing? Computational Science - ICCS 2002. 2nd International Conference, Amsterdam, the Netherlands, April. 21–24, 2002. Proceedings. Part 3. Sloot, Peter M. A. (ed.) et al. Berlin: Springer. Lect. Notes Comput. Sci. 2331, 863-871, 2002. Jointly with Kaspar Nipp
  34. A finite-volume mass- and vorticity-conserving shallow-water model using penta-/hexagonal grids. Numerical mathematics and advanced applications, 746–755, Springer, Berlin, 2004. Jointly with William Sayer.

35. Adapting the CSE program at ETH Zurich to the Bologna process. Computational Science - ICCS 2004. 4th International Conference, Krakow, Poland, 6 - 9 June, 2004. Proceedings. Berlin: Springer Part.1 Pt.1 Bubak, M.; Albada, G.D.v.; Sliot, P.M.A.; Dongarra, J.J. (Eds.) Lecture Notes in Computer Science 3036, 1196 - 1201, 2004. Jointly with Kaspar Nipp.
36. Solenoidal Initial Conditions for Locally Divergence-free MHD Simulations, in Modeling, Simulation and Optimization of Complex Processes, Proc. Intl. Conference on High Performance Scientific Computing in Hanoi, Vietnam 2003, ed. by H.G. Bock, E. Kostina, H.X. Phu, and R. Rannacher, Conference Proceedings, Springer, Berlin (2005), ISBN 3-540-23027-0, 235-254, jointly with M. Torrilhon
37. Compact Third Order Logarithmic Limiting for Non-Linear Hyperbolic Conservation Laws, Proceedings of Hyperbolic problems: theory, numerics, applications: 11th international conference in Lyon, July 2006, jointly with M. Cada, M. Torrilhon
38. Flexible Stability Domains for Explicit Runge-Kutta Methods, in *Some Topics in Industrial and Applied Mathematics*, Proceedings of the Shanghai Forum on Industrial and Applied Mathematics, 25 - 26 May 2006 Series in Contemporary Applied Mathematics, Vol. 8, Higher Education Press (Beijing) and World Scientific Publishing Co. Pt. Ltd., 2007, Rolf Jeltsch, Ta-Tsien Li, Ian H. Sloan (Ed.). Jointly with Manuel Torrilhon.
39. Numerical Simulation of High Current Arc in Circuit Breakers, in *NNNNNNNN*, Proceedings of the 24th International Conference on Electrical Contacts, 9 - 12 June 2008, Saint-Malo, France, NNNNNNN (Ed.). 6 pp. Jointly with P. Huguenot, Vincent Wheatly, Chrstoph Schwab, Manuel Torrilhon.
40. Numerical Simulation of Compressible Magnetohydrodynamic Plasma Flow in a Circuit Breaker, in *Numerical Analysis and Applied Mathematics*, International Conference on Numerical Analysis and Applied Mathematics 2008, 16 -20 September 2008, Kos, Greece, Theodore E. Simos, George Psihoyios, Ch. Tsi-touras (Ed), AIP Conference Proceedings 1048, American Institute of Physics, Melville, New York (2008), ISBN 978-0-7354-0576-9, pp 21-22, jointly with Ralf Hiptmair, Patrick Huguenot, Harish Kumar, Christoph Schwab, Manuel Torrilhon, Vincent Wheatly.

## C Books

1. *CONPAR 86: Conference on Algorithms and Hardware for Parallel Processing, Aachen, Sept. 17-19, 1986, Proceedings* Lecture Notes in Computer Science 1986, ISBN 3-540-16811-7, Jointly with Wolfgang Händler, Dieter Haupt, Wilfried Juling, Otto Lange (Eds.)

2. *Nonlinear Hyperbolic Equations - Theory, Computation Methods, and Applications* Notes on Numerical Fluid Mechanics, Vol. 24, Vieweg & Sohn, 1989, Jointly with J. Ballmann (Ed.)
3. *Stability Theory, Hurwitz Centenary Conference, Ascona, 1995* Birkhäuser, Basel, Vol. 121, 1996, ISBN: 3-7643-5474-7
4. *Hyperbolic Problems: Theory, Numerics, Applications, Seventh International Conference in Zürich, February 1998, Vol 1* ISNM Vol 129, Birkhäuser Verlag, Basel, Boston, Berlin, 1999, Jointly with M. Fey (Ed.), ISBN 0-8176-6080-1
5. *Hyperbolic Problems: Theory, Numerics, Applications, Seventh International Conference in Zürich, February 1998, Vol 2* ISNM Vol 130, Birkhäuser Verlag, Basel, Boston, Berlin, 1999, Jointly with M. Fey (Ed.), ISBN 0-8176-6087-9
6. *PAMM, Proc. Appl. Math. Mech., Vol. 1, No. 1 (2002)*. Proceedings of the 72nd Annual Meeting of the Gesellschaft für Angewandte Mathematik und Mechanik e.V., held 12-15 February 2001 at ETH Zurich, Zurich, Switzerland. 2002. Jointly with Martin Gutknecht, Leonhard Kleiser.
7. *Some Topics in Industrial and Applied Mathematics* Proceedings of the Shanghai Forum on Industrial and Applied Mathematics, 25 - 26 May 2006. Series in Contemporary Applied Mathematics, Vol. 8, Higher Education Press (Beijing) and World Scientific Publishing Co. Pt. Ltd. 2007. Jointly with Ta-Tsien Li, Ian H. Sloan (Ed.), ISBN 978-981-270-934-9, 981-270-934-7
8. *PAMM, Proc. Appl. Math. Mech., Vol. 7, No. 1 (2008)*. Proceedings of the 78nd Annual Meeting of the Gesellschaft für Angewandte Mathematik und Mechanik e.V., and the 6th International Congress on Industrial and Applied Mathematics, ICIAM07, held 16-20 July 2007 in Zurich, Switzerland. 2007. Jointly with Martin Gutknecht, Thomas Rösgen, Stefan Sauter.
9. *Perspectives in Numerical Analysis 2008, BIT Numerical Analysis, Vol. 48, Number 2 / June 2008* Proceedings of the conference Perspectives in Numerical Analysis. Jointly with Timo Eirola, Claes Johnson, Rolf Stenberg.
10. *ICIAM07, 6th International Congress on Industrial and Applied Mathematics, Zürich, Switzerland, 16-20 July 2007, Invited Lectures*, EMS publishing house 2009, jointly with G. Wanner.

**D Reports** (Reports which are practically identical to published papers are not listed here)

1. Generalized Disks of Contractivity for Explicit and Implicit Runge-Kutta Methods, Dept. of Numerical Analysis, The Royal Institute of Technology, Stockholm, TRIT-NA-7906, jointly with G. Dahlquist.



2. Stability and Accuracy of Time Discretizations for Initial Value Problems, Helsinki University of Technology, Math. -Inst. Report - HTKK-Mat-A187, 1981, pp 96, jointly with O. Nevanlinna (extended version of publication A 17)
3. Accuracy of Multistage Multistep Formulas, Report Nr. 23 Inst. for Geometry and Practical Mathematics, RWTH Aachen, 1983, pp 92, jointly with O. Nevanlinna. (Extended version of the publications A 19 and A 22)
4. Special aspects of reacting inviscid blunt body, Inst. Research report No. 92-07, SAM, ETH Zürich. Jointly with M. Fey, P. Karmann.
5. Numerical solution of nozzle flow, Inst. Research report No. 92-08, SAM, ETH Zürich. Jointly with M. Fey, P. Karmann.
6. Numerical analysis of source terms in Navier-Stokes equations, Final report of HERMES R & D Programmes for Avions M. Dassault. Jointly with M. Fey, P. Karmann.
7. Stagnation point analysis, Inst. Research report No. 92-03, SAM, ETH Zürich. Jointly with M. Fey, S. Müller.
8. Uniqueness of piecewise Lipschitz continuous solutions of the Cauchy problem for  $2 \times 2$  conservation laws, Inst. Research report No. 93-03, SAM, ETH Zürich. Jointly with X. Wang.
9. The method of transport for nonlinear systems of hyperbolic conservation laws in several space dimensions, Inst. Research report No. 97-12, SAM, ETH Zürich. Jointly with M. Fey, J. Maurer, A.-T. Morel.

## **E Lecture Notes**

1. Multiderivative Multistep Methods for the Numerical Solution of Initial Value Problems of Ordinary Differential Equations, Seminar Notes 1975/76, University of Kentucky, 1976, pp 167, Math.Rev. 57,Nr. 1897, Zentralblatt 356.65064.
2. Numerische Mathematik I für Ingenieure, Teil A, 1982, pp 158, Lecture Notes.
3. Numerische Mathematik I für Ingenieure, Teil B, 1984, pp 143, Lecture Notes.
4. Numerische Mathematik, Vorlesung für die Abt. IIIA, 1997, pp 224, Lecture Notes.
5. Math. and Systems-Methoden, Vorlesung für die Chemie-Ing., WS 1999-2000, 1999
6. Numerische Mathematik für Studiengang Rechnergestützte Wissenschaften, Wintersemester 2005/06, jointly with Ralf Hiptmair.

## **F Other Scientific Publications**

1. Berechnung hypersonischer Staupunktströmungen bei hohen Temperaturen unter Berücksichtigung chemischer Reaktionen, in Arbeits- und Ergebnisbericht des Sonderforschungsbereiches 253, Grundlagen des Entwurfs von Raumflugzeugen, 231 -250, 1995. Jointly with S. Müller, A. Klomfass, J. Ballmann.
2. Upwindschemata für Systeme von Erhaltungssätzen, in Arbeits- und Ergebnisbericht des Sonderforschungsbereiches 27, Aufteilung und Fokussierung von Wellen, 1986, pp 28, jointly with B. Einfeldt, K.-G. Strack
3. Numerische Berechnung einer Funktion aus einer höheren Ableitung, Dissertation Nr. 4901, ETH, Zürich, Juris 1972.

### **G CSE Annual reports**

1. *CSE Computational Science and Engineering, Annual Report 2000/2001.* 2001. Edited jointly with Kaspar Nipp, Wilfred van Gunsteren
2. *CSE Computational Science and Engineering, Annual Report 2001/2002.* 2002. Edited jointly with Kaspar Nipp, Wilfred van Gunsteren
3. *CSE Computational Science and Engineering, Annual Report 2002/2003.* 2003. Edited jointly with Kaspar Nipp, Wilfred van Gunsteren
4. *CSE Computational Science and Engineering, Annual Report 2003/2004.* 2004. Edited jointly with Kaspar Nipp, Wilfred van Gunsteren
5. *CSE Computational Science and Engineering, Annual Report 2004/2005.* 2005. Edited jointly with Kaspar Nipp, Wilfred van Gunsteren
6. *CSE Computational Science and Engineering, Annual Report 2005/2006.* 2006. Edited jointly with Kaspar Nipp, Wilfred van Gunsteren
7. *CSE Computational Science and Engineering, Annual Report 2006/2007.* 2007. Edited jointly with Kaspar Nipp, Wilfred van Gunsteren

### **H Other Nonscientific Publications**

1. Numerisches Lösen von Zeitabhängigen Problemen: Stabilität kontra Genauigkeit, Alma Mater Aquensis, 87-95, 1984.
2. Kleinrechner in der Lehre, RWTH-Themen Heft 2, 31-34, 1982.
3. Leonhard Euler Center, Swiss ERCOFTAC Pilot Center, ERCOFTAC Bulletin No **33**, 36-37, 1997.
4. Introduction, Leonhard Euler Centre, Annual Report 1997, 5-6, March 1998
5. Editorial, EMS Newsletter, No 31 (1999) p 3
6. Introduction, Leonhard Euler Centre, Annual Report 1998, 5-6, March 1999
7. The European Mathematical Society, EMS, ECMI Newsletter No 25 (1999) 23-25

8. EMS and SIAM Plan Joint Activities, SIAM NEWS, September 1999, p 2
9. ICIAM 99 in Edinburgh, 5-9 July 1999, EMS Newsletter, No 33 (1999) 10-11
10. Die Europäische Mathematische Gesellschaft, Rundbrief der GAMM, 1999 - Brief 2, p 37-39
11. Interview with Olavi Nevanlinna, EMS Newsletter, No 34 (1999) 18-19
12. Message from the EMS President, EMS Newsletter, No 35 (2000) 3 -
13. Interview with Peter Deuffhard, EMS Newsletter, No 36 (2000) 14 -
14. Letter from the president of the European Mathematical Society, Mathematical Intelligencer, , 2000
15. Letter from the president of the European Mathematical Society, Final Programm of the third European Congress of Mathematics, 10-14 July 2000
16. Editorial, EMS Newsletter, No 46 (2002) 3-4
17. The Keynote, ERCIM News No. 50, July 2002.
18. The European Research Area: Utopia vs. Reality, Academia Scientiarum Fennica, Vuosikirja - Year Book 2002, 107-114
19. Welcome address at the opening ceremony 2005, Rundbrief GAMM, Heft 2, 2005, 18 - 20.
20. Speech on the occasion of the Mayor's reception, Rundbrief GAMM, Heft 2, 2005, 22.
21. Bericht des Präsidenten an die Mitglieder, Mitgliederversammlung am 30. März 2005, Rundbrief GAMM, Heft 2, 2005, 23 - 26.
22. Beschlussprotokoll zur GAMM-Hauptversammlung 2005, Rundbrief GAMM, Heft 2, 2005, 27 - 29. Jointly with Volker Ulbricht.
23. Welcome address at the opening ceremony GAMM 2006, Rundbrief GAMM, Heft 2, 2006, 14 - 18.
24. Bericht des Präsidenten der GAMM an die Mitglieder, Mitgliederversammlung am 29. März 2006, Rundbrief GAMM, Heft 2, 2006, 20 - 24.
25. Beschlussprotokoll zur GAMM-Hauptversammlung 2006, Rundbrief GAMM, Heft 2, 2006, 25 - 26. Jointly with Volker Ulbricht.
26. Program Choices Abound with Multiple Meetings Set to Converge in Zürich, SIAM News, 2007.
27. Liebe Leserin, Lieber Leser, Editorial, Rundbrief GAMM, Heft 1, 2007, 3.
28. Dear Reader, Editorial, Rundbrief GAMM, Heft 1, 2007, 4.
29. An Interview with Rolf Jeltsch, EMS Newsletter, No 63 (2007) 32 - 35. Jointly with the interviewer, Olavi Nevanlinna.

30. Letter from the Congress Director, Zurich Intelligencer, International Congress on Industrial and Applied Mathematics, Zurich 2007. Springer, 2007, 4-5.
31. Simulation tackle ever more complex problems, Guest Editorial, Comsol News, 2007, 30-31.
32. 6. Internationaler Kongress für Industrielle und Angewandte Mathematik, Zürich als Mekka der Mathematik. Medienmitteilung, Corporate Communications, ETH Zürich. 7 July 2007. 3 pages. Jointly with Corporate Communications, ETH Zürich.
33. Welcome address at the opening ceremony GAMM 2007, Rundbrief GAMM, Heft 2, 2007, 18 - 19.
34. Bericht über die Jahrestagung der GAMM 2007, Rundbrief GAMM, Heft 2, 2007, 20 - 22. Jointly with Martin Gutknecht, Thomas Rösgen.
35. Mitgliederversammlung, Bericht des Präsidenten Rolf Jeltsch am 19. Juli 2007. Rundbrief GAMM, Heft 2, 2007, 27 - 29.

Zürich, 21 February 2009