

## List of Publications

### Scientific articles

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6. Ein Abstiegsverfahren für nicht-diskrete Tschebyscheff-Approximationsprobleme. In: Numerische Methoden der Approximationstheorie, Band 4 (Hrsg. L. Collatz, G. Meinardus, H. Werner), 154–171. ISNM Vol. 42, Birkhäuser, Basel, 1978.
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10. Numerical experiments on solving Theodorsen's integral equation for conformal maps with the fast Fourier transform and various nonlinear iterative methods. SIAM J. Scient. Stat. Comp. **4**, 1–30 (1983).
11. Two applications of periodic splines. In: Approximation Theory III (E.W. Cheney, ed.), 467–472. Academic Press, New York, 1980.

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14. (with Lloyd N. Trefethen) The Carathéodory-Fejér method for real rational approximation. SIAM J. Numer. Anal. **20**, 420–436 (1983).
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16. (with Stephen W. Ellacott) The polynomial Carathéodory-Fejér approximation method for Jordan regions. IMA J. Numer. Anal. **3**, 207–220 (1983).
17. (with Stephen W. Ellacott) The Carathéodory-Fejér extension of a finite geometric series. IMA J. Numer. Anal. **3**, 221–227 (1983).
18. Rational Carathéodory-Fejér approximation on a disk, a circle, and an interval. J. Approx. Theory **41**, 257–278 (1984).
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22. (with Lloyd N. Trefethen) Nonuniqueness of best rational Chebyshev approximations on the unit disk. J. Approx. Theory **39**, 275–288 (1983).
23. (with Lloyd N. Trefethen) Real vs. complex rational Chebyshev approximation on an interval. Trans. Amer. Math. Soc. **280**, 555–561 (1983).
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25. Algebraically solvable Chebyshev approximation problems. In: *Approximation Theory IV* (C.K. Chui, L.L. Schumaker, J.D. Ward, eds.), 491–498. Academic Press, New York, 1983.
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64. (with Klaus J. Ressel) Look-ahead procedures for Lanczos-type product methods based on three-term Lanczos recurrences. *SIAM J. Matrix Anal. Appl.* **21**, 1051-1078 (2000).
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### Extended Abstracts

1. A completed theory of the unsymmetric Lanczos process and related algorithms. Extended abstract, Householder Symposium XI on Numerical Algebra, Tylösand, Sweden, 1990.
2. A weakly stable, generically superfast algorithm for non-Hermitian Toeplitz systems. Householder Symposium XII on Numerical Algebra, Lake Arrowhead, CA, USA, 1993.
3. (with Klaus J. Ressel) Look-ahead procedures for Lanczos-type product methods based on three-term recurrences. Extended abstract, Copper Mountain Conference on Iterative Methods, Copper Mtn., CO, USA, 1996.
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7. Conquering roundoff effects in the biconjugate gradient and related methods. Extended abstract, International RIKEN Symposium on Linear Algebra and its Applications, Tokyo, Japan, 1999.
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### Popular science articles, historical notes

- (1) Als wären’s 10’000 Personalcomputer. Finanz und Wirtschaft, Magazin “Informatik 88”, 28. Sept. 1988.
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## Lecture Notes

- (1) Lineare Algebra — Studiengang Informatik, personal web site, 2001–2007.
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- (3) (with P. Arbenz, O. Chinellato, M. Sala) Software for Numerical Linear Algebra, ETH Lecture Notes, Jul. 2006

## Books edited

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- (2) Developments and Trends in Iterative Methods for Large Systems of Equations — in memoriam Rüdiger Weiss (W. Schönauer and M.H. Gutknecht, eds.), Special Issue, Appl. Numer. Math. **41**, No. 1 (April 2002), 245 pages.
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