

## Publications:

- **Die Probleme von Kurosh und Burnside.**  
Diplomarbeit, Universität Mannheim (1978).
- **Numerische analytische Fortsetzung durch Interpolationsverfahren.**  
Dissertation, Universität Karlsruhe (1982).
- Interpolation methods for numerical analytical continuation (jointly with W. Niethammer).  
In: **Multivariate Approximation II** (W. Schempp, K. Zeller, eds.), Birkhäuser, Basel, 131–141 (1982).
- On the construction of semiiterative methods (jointly with W. Niethammer).  
SIAM J. Numer. Anal. 20, 1153–1160 (1983).
- On the convergence of Padé-type approximants to analytic functions.  
J. Comput. Appl. Math. 10, 219–227 (1984).
- A study of semiiterative methods for nonsymmetric systems of linear equations (jointly with W. Niethammer and R. S. Varga).  
Numer. Math. 47, 505–533 (1985).
- Iterationsverfahren für nichtsymmetrische Gleichungssysteme und Approximationsmethoden im Komplexen (jointly with W. Niethammer and R. S. Varga).  
Jber. d. Dt. Math.-Verein. 89, 1–32 (1987).
- On the solution of singular linear systems of algebraic equations by semiiterative methods (jointly with I. Marek and W. Niethammer).  
Numer. Math. 53, 265–283 (1988).
- On semiiterative methods for the solution of singular linear systems (jointly with I. Marek and W. Niethammer).  
In: **Proceedings of the Second International Symposium on Numerical Analysis, Prague 1987** (I. Marek, ed.), Teubner-Texte zur Mathematik 107, Teubner, Leipzig, 131–138 (1988).
- On semiiterative methods generated by Faber polynomials.  
Numer. Math. 56, 139–156 (1989).
- On hybrid semi-iterative methods (jointly with X. Li and R. S. Varga).  
SIAM J. Numer. Anal. 26, 152–168 (1989).
- On the application of orthogonal polynomials to the iterative solution of singular linear systems (jointly with L. Reichel).  
In: **Vector and Parallel Computing** (J. Dongarra, I. Duff, P. Gaffney and S. McKee, eds.). Prentice-Hall, Englewood Cliffs, 285–168 (1989).
- **Semiiterative Methoden für nichtsymmetrische lineare Gleichungssysteme.**  
Habilitationsschrift, Universität Karlsruhe (1989).
- The near-best solution of a polynomial minimization problem by the Carathéodory-Fejér method (jointly with G. Starke).  
Constr. Approx. 6, 303–319 (1990).

- Optimal successive overrelaxation iterative methods for  $p$ -cyclic matrices (jointly with W. Niethammer and A. Ruttan).  
Numer. Math. 57, 593–606 (1990).
- Computational complexity analysis of two Galerkin-FE / CG-like approaches for the advection-dispersion equation (jointly with H. Daniels and A. Peters).  
In: **Numerical Methods in Laminar and Turbulent Flow VII** (C. Taylor, J. H. Chin, G. M. Homsy, eds.), Pineridge Press, Swansea, 1579–1589 (1991).
- Symmetric versus non-symmetric matrix techniques: Implementation of two Galerkin-FE approaches for the advection-dispersion equation (jointly with H. Daniels and A. Peters).  
In: **Applications of Supercomputing in Engineering II** (C. A. Brebbia, D. Howard, A. Peters, eds.), Elsevier, London, 387–401 (1991).
- Acceleration of relaxation methods for non-Hermitian linear systems (jointly with W. Niethammer and R. S. Varga).  
SIAM J. Matrix Anal. Appl. 13, 979–991 (1992).
- Fields of values and iterative methods.  
Linear Algebra Appl. 180, 167–197 (1993).
- Is the optimal  $\omega$  best for the SOR iteration method? (jointly with R. S. Varga).  
Linear Algebra Appl. 182, 257–277 (1993).
- Zeros and local extreme points of Faber polynomials associated with hypocycloidal domains (jointly with R. S. Varga).  
Electr. Trans. Numer. Anal. 1, 49–71 (1993).
- Structured sparse matrix-vector multiplication on a MASP (jointly with T. Dehn, K. Giebertmann and V. Sperling).  
ZAMM Z. Angew. Math. Mech. 74 (1994), T534–T538.
- On the zeros of orthogonal polynomials for regular  $N$ -gons (jointly with H. Stahl).  
In: **Collection of Unsolved Problems in Linear and Complex Analysis**. (V. Havin and N. Nikolskii, eds.), Springer-Verlag, Heidelberg 1994.
- Optimal semi-iterative methods applied to SOR in the mixed case (jointly with R. S. Varga).  
In: **Numerical Linear Algebra** (L. Reichel, A. Ruttan, R. S. Varga, eds.), Walter de Gruyter, Berlin, 47–73 (1994).
- Structured sparse matrix-vector multiplication on massively parallel SIMD architectures (jointly with T. Dehn, K. Giebertmann and V. Sperling).  
Parallel Computing 21 (1995), 1867–1894.
- A very short finite element tutorial (jointly with O. G. Ernst and W. Queck).  
Freiberger Forschungshefte 279, Werkstofffertigungstechnologie, 17–40 (1996).
- **Numerische Lösung von Gleichungssystemen** (jointly with W. Niethammer),  
Lecture Notes, FernUniversität-Gesamthochschule Hagen 1997.
- Analysis of accelerating strategies for minimal residual methods (jointly with O. Ernst and O. Schneider).  
J. Comput. Appl. Math. 123, 261–292 (2000).

- Geometric aspects of the theory of Krylov subspace methods (jointly with O. Ernst).  
Acta Numerica 10, 251–312 (2001).
- A restarted Krylov subspace method for the evaluation of matrix functions (jointly with O. Ernst).  
SIAM J. Numer. Anal. 44, 2481–2504 (2006).
- Computational aspects of the stochastic finite element method (jointly with O. Ernst and E. Ullman).  
Comput. Visual Sc. 10, 3–15 (2007).
- Implementation of a restarted Krylov subspace method for the evaluation of matrix functions (jointly with M. Afanasjew, O. G. Ernst and S. Güttel).  
Linear Algebra Appl. 429, 229–314 (2008).
- A generalization of the steepest descent method for matrix functions (jointly with M. Afanasjew O. G. Ernst and S. Güttel).  
El. Trans. Numer. Anal. 28, 206–222 (2008).
- Deflated restarting for matrix functions (jointly with O. G. Ernst and S. Güttel).  
SIAM J. Matrix Anal. 32, 621–641 (2011)