

# A Bibliography of Publications of Axel Ruhe (1942–2015)

Axel Ruhe  
Mathematics Department  
University of California  
Berkeley CA 94720-3840  
USA

Tel: +1 510 642 8570  
FAX: +1 510 642 8204

E-mail: [ruhe@math.berkeley.edu](mailto:ruhe@math.berkeley.edu) (Internet)

13 October 2017  
Version 2.02

## Abstract

This bibliography records publications of Axel Ruhe.

## Title word cross-reference

*QR* [Ruh66a, Ruh66b].

**-method** [Ruh66a, Ruh66b].

**1** [Ruh12d, Ruh13a]. **1982** [KR83]. **1993** [Ruh94a].

**2** [Ruh13b, Ruh14b].

**3** [Ruh13c].

**4** [Ruh13d].

**54-3** [Ruh14a].

**70th** [GKRV90]. **75th** [Ruh94a].

**Accelerated** [Ruh79c]. **advances** [GGL94]. **after** [Ruh69]. **Algebra** [BDD<sup>+</sup>95, Ruh82]. **algebraic** [BDDR00, Ruh70a]. **Algol** [Ruh66a]. **Algorithm** [KR80a, KR80b, Ruh70c, Ruh80d, ER82, HR90, Ruh80a, Ruh83b, Ruh93, Ruh94b, Ruh98, Ruh00b, Ruh00a]. **Algorithms** [ER87, Ruh70a, Ruh73, Ruh79c, Ruh79a, RW80, RS98, Ruh74a, Ruh75a, Ruh94c, Ruh94d]. **almost** [Ruh75b]. **APL** [Ruh80a]. **applied** [HR90]. **approach** [WRWD84]. **Arbitrary** [Ruh68]. **Arnoldi** [Ruh83b, Ruh96]. **Aspects** [Ruh79a, Ruh83a]. **Axel** [BE15].

**Band** [Ruh79a]. **Based** [Ruh80d, Ruh75a, Ruh80a]. **Between** [Ruh80d]. **Birthday** [GKRV90, Ruh94a]. **BIT** [Ruh12d, Ruh13a, Ruh13b, Ruh13c, Ruh13d, Ruh14b, Ruh14c]. **BIT50** [Ruh11a]. **Book** [Ruh95]. **Bounds** [Ruh70d]. **branch**

[ZR86].

**Carl** [Ruh94a]. **Carl-Erik** [Ruh94a].  
**chemistry** [AHR87]. **closeness** [Ruh75b].  
**Closest** [Ruh87]. **Collaborators** [Ruh09a].  
**collinearity** [WRWD84]. **Complex**  
 [AHR87, KR80a, KR80b, Ruh66a, Ruh66b,  
 Ruh10e, Ruh94b]. **components** [Ruh74b].  
**Computation**  
 [KR80a, KR80b, Ruh77, RK78, Ruh79a,  
 Ruh84, RS98, OR06, Ruh74b].  
**Computations** [Ruh82, Ruh95].  
**Computing** [Ruh96]. **conjugate**  
 [Ruh70b]. **Conference** [KR83]. **conjugate**  
 [RW72]. **constants** [AHR87]. **constraints**  
 [Ruh79b]. **Contents**  
 [Ruh04, Ruh05a, Ruh05b, Ruh05c, Ruh05d,  
 Ruh06b, Ruh06c, Ruh07d, Ruh07f, Ruh08b,  
 Ruh08c, Ruh08d, Ruh09c, Ruh09d, Ruh09b,  
 Ruh10c, Ruh10d, Ruh11c, Ruh11d, Ruh12b,  
 Ruh12c, Ruh07c, Ruh07e]. **Convergence**  
 [Ruh67, Ruh68]. **convergent** [Ruh75a].  
**criteria** [ZR86].

**data** [Ruh80b, Ruh80c]. **Dedication**  
 [GKRV90]. **Determination** [Ruh70c].

### Editorial

[Ruh03a, Ruh03b, Ruh06a, Ruh07a, Ruh07b,  
 Ruh08a, Ruh10a, Ruh10b, Ruh11b, Ruh12a].  
**eigenproblem** [Ruh70b]. **Eigenvalue**  
 [Ruh73, Ruh84, Ruh93, RS98, BDDR00,  
 ER80, OR06, Ruh70a, Ruh74a, Ruh74c,  
 Ruh75a, Ruh76, Ruh83b, Ruh94c, Ruh94d,  
 Ruh94b, Ruh00b, Ruh00a, ZR86].  
**Eigenvalues**  
 [Ruh66a, Ruh66b, Ruh70d, Ruh79a, Ruh80a,  
 Ruh75b, Ruh77, Ruh90, Ruh96, Ruh10e].  
**eigenvectors** [Ruh77]. **Elementary**  
 [Ruh80d]. **elimination** [Ruh79b]. **empirical**  
 [Ruh80b, Ruh80c]. **environment** [Ruh80a].  
**equality** [Ruh79b]. **Erik** [Ruh94a].  
**example** [HR90]. **exponentials**  
 [Ruh80b, Ruh80c].

**F2** [KR80a]. **Field** [ER87]. **finally** [Ruh87].  
**Fitting** [Ruh80b, Ruh80c]. **flow** [HR90].  
**following** [HR90, ZR86]. **Form**  
 [KR80a, KR80b]. **formation** [AHR87].  
**found** [Ruh87]. **Fröberg** [Ruh94a].  
**Functions** [RK78].

**Gauss** [Ruh79c]. **Gene** [Ruh08a]. **General**  
 [Ruh70c]. **Generalization** [Ruh68].  
**Generalized**  
 [Ruh93, ER80, Ruh79b, WRWD84]. **Golub**  
 [Ruh08a]. **gradients** [RW72]. **Gram**  
 [Ruh83a]. **guide** [BDDR00].

**Havsbad** [KR83]. **Held** [KR83]. **her**  
 [GKRV90]. **Howard** [Ruh08a].  
**hydrodynamical** [HR90].

**II** [Ruh94d]. **III** [Ruh94b]. **ill** [Ruh70b].  
**ill-conditioned** [Ruh70b].  
**Implementation** [Ruh79a]. **Information**  
 [BR01, BR05]. **Introduction**  
 [Ruh04, Ruh05a, Ruh05b, Ruh05c, Ruh05d,  
 Ruh06b, Ruh06c, Ruh07c, Ruh07d, Ruh07e,  
 Ruh07f, Ruh08b, Ruh08c, Ruh08d, Ruh09b,  
 Ruh09c, Ruh09d, Ruh10c, Ruh10d, Ruh11c,  
 Ruh11d, Ruh12b, Ruh12c]. **Invariant**  
 [Ruh70d]. **Inverse** [Ruh80d, RW72].  
**inverses** [WRWD84]. **Issue**  
 [Ruh04, Ruh05a, Ruh05b, Ruh05c, Ruh05d,  
 Ruh06b, Ruh06c, Ruh07d, Ruh07f, Ruh08b,  
 Ruh08c, Ruh08d, Ruh09c, Ruh09d, Ruh09b,  
 Ruh10c, Ruh10d, Ruh11c, Ruh11d, Ruh12b,  
 Ruh12c, Ruh07c, Ruh07e]. **Iteration**  
 [Ruh80a, Ruh80d, RW72]. **Iterative**  
 [Ruh74a, Ruh75a, GGL94].

**Jacobi** [Ruh67, Ruh68, Ruh80d]. **JNF**  
 [KR80a]. **Jordan** [KR80a, KR80b]. **June**  
 [Ruh94a].

**Krylov** [BR01, BR05, OR06, Ruh84, Ruh93,  
 Ruh94c, Ruh94d, Ruh94b, RS98, Ruh98,  
 Ruh00b, Ruh00a, Ruh10e]. **Kublanovskaya**

[GKRV90].

**Lanczos** [ER80, ER82, ER87, Ruh79a].

**Large** [Ruh79a, ER80, Ruh74a, Ruh74c, Ruh76, Ruh98]. **Least**

[Ruh79c, RW80, Ruh79b, WRWD84]. **Linear** [BDD<sup>+</sup>95, Ruh82, Ruh79b, WRWD84].

**March** [KR83]. **Mathematical** [Ruh82].

**Matrices** [Ruh67, Ruh68, Ruh79a, Ruh74a, Ruh74c, Ruh75b, Ruh94b]. **Matrix** [ER87, KR80a, KR80b, Ruh69, Ruh70c, RK78, Ruh66a, Ruh66b, Ruh70b, Ruh87, Ruh95, Ruh98, Ruh00b, Ruh00a, KR83, Ruh94d].

**Means** [Ruh70d]. **memoriam** [Ruh08a].

**Method** [Ruh67, Ruh68, BR05, ER80, Ruh66a, Ruh66b, RW72].

**Methods** [Ruh84, GGL94, Ruh74c, Ruh76]. **missing** [Ruh74b]. **Model** [RS98, OR06].

**N** [GKRV90]. **Newton** [Ruh79c].

**Nonlinear** [Ruh73, Ruh79c, RW80, Ruh96, Ruh00b, Ruh00a]. **nonsymmetric** [Ruh70a, Ruh83b, Ruh94c, Ruh94d, Ruh94b, Ruh98].

**Norm** [Ruh69]. **Normal** [KR80a, KR80b, Ruh67, Ruh75b, Ruh87].

**Numerical** [KR80a, KR80b, Ruh70c, Ruh74b, Ruh76, RK78, Ruh83a, ZR86, ER80, HR90].

**observations** [Ruh74b]. **order** [OR06].

**Orthogonalization** [Ruh83a].

**package** [ER82]. **pairs** [Ruh94d]. **partial** [WRWD84]. **path** [HR90, ZR86]. **Pencils** [ER87, KR83, Ruh98, Ruh10e].

**Perturbation** [Ruh70d]. **Pite** [KR83]. **PLS** [WRWD84]. **Polynomial** [Ruh95]. **positive** [Ruh80b, Ruh80c].

**practical** [BDDR00, Ruh98].

**Preface** [BBRZ02, Ruh06d, Ruh07f, Ruh09d, Ruh12d, Ruh13a, Ruh13b, Ruh13c, Ruh13d, Ruh14a, Ruh14b, Ruh14c]. **principal** [Ruh74b]. **Problem** [Ruh73, AHR87,

Ruh70a, Ruh74c, WRWD84]. **Problems** [BDD<sup>+</sup>95, Ruh79c, RW80, BDDR00, ER80, Ruh76, Ruh79b, Ruh83b, Ruh93, Ruh94c, Ruh94d, Ruh94b, Ruh00b, Ruh00a].

**Proceedings** [KR83]. **programming**

[Ruh66a]. **Properties** [Ruh70b].

**Quadratic** [Ruh67, Ruh68]. **Quotient** [Ruh80a].

**Rational** [OR06, Ruh84, Ruh93, Ruh94c, Ruh94d, RS98, Ruh98, Ruh10e, Ruh94b, Ruh00b, Ruh00a]. **Rayleigh** [Ruh80a]. **real** [Ruh94b, Ruh10e].

**Reduction** [RS98, OR06].

**Reflections** [Ruh80d].

**regression** [WRWD84]. **Relation** [Ruh80d].

**retrieval** [BR01, BR05]. **Review** [Ruh95].

**Riemann** [Ruh90]. **Rotations** [ER87].

**Ruhe** [BE15].

**scheme** [Ruh79b]. **Schmidt** [Ruh83a].

**Separable** [RW80]. **Sequence** [Ruh84].

**sequences** [BR01]. **several** [Ruh74b].

**shifts** [Ruh94b]. **short** [BR01]. **Showing**

[Ruh90]. **sided** [Ruh83b]. **Similarity**

[Ruh69]. **singular** [Ruh75b]. **Software**

[Ruh82, ER82]. **solution**

[AHR87, BDDR00, ER80, Ruh76]. **SOR**

[Ruh74c]. **SOR-methods** [Ruh74c]. **Sparse**

[Ruh79a, ER80, Ruh74c, Ruh76, Ruh98].

**Spectral** [ER82, ER80, Ruh96]. **sphere**

[Ruh90]. **splittings** [Ruh75a]. **Squares**

[Ruh79c, RW80, Ruh79b, WRWD84].

**STLM** [ER82]. **Structure** [Ruh70c].

**subspace** [BR05]. **Subspaces** [Ruh70d].

**sums** [Ruh80b, Ruh80c]. **Sweden** [KR83].

**switching** [ZR86]. **Symmetric**

[ER87, Ruh79a, ER80, Ruh74a].

**Templates** [BDD<sup>+</sup>95, BDDR00].

**Transformation**

[ER80, ER82, Ruh69, Ruh96]. **two** [Ruh83b].

**two-sided** [Ruh83b].

**universal** [Ruh79b]. **used** [RW72]. **using** [BR01].

**Value** [ER87]. **values** [Ruh75b]. **Vectors** [Ruh83a]. **Vera** [GKRV90]. **very** [BR01, Ruh70b]. **volume** [Ruh09a].

## References

[AHR87] L. Andersson, K. Holmström, and A. Ruhe. Complex formation constants — a problem from solution chemistry. In J. C. Mason and M. G. Cox, editors, *Algorithms for approximation*, pages 557–572. Clarendon Press, Oxford, UK, 1987.

**Andersson:1987:CFC**

[BBRZ02] Jesse L. Barlow, Michael W. Berry, Axel Ruhe, and Hongyuan Zha. Preface. *Computational Statistics & Data Analysis*, 41(1): 1–2, November 28, 2002. CODEN CSDADW. ISSN 0167-9473 (print), 1872-7352 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0167947302002049>.

**Barlow:2002:P**

[BDD<sup>+</sup>95] Z. Bai, D. Day, J. Demmel, J. Dongarra, M. Gu, A. Ruhe, and H. van der Vorst. Templates for linear algebra problems. LAPACK Working Note 106, Department of Computer Science, University of Tennessee, Knoxville, Knoxville, TN 37996, USA, October 1995. URL <http://www.netlib.org/lapack/lawns/lawn106.ps>;

**Bai:1995:TLAa**

[BDDR00] Zhaojun Bai, James Demmel, Jack Dongarra, and Axel Ruhe, editors. *Templates for the solution of algebraic eigenvalue problems: a practical guide*. Software, Environments, and Tools. Society for Industrial and Applied Mathematics, Philadelphia, PA, USA, 2000. ISBN 0-89871-471-0 (paperback), 0-89871-958-5 (e-book). xxx + 410 pp. LCCN QA193 .T46 2000. URL <http://www.loc.gov/catdir/enhancements/fy0726/00059507-d.html>; <http://www.loc.gov/catdir/enhancements/fy0726/00059507-t.html>. A practical guide.

**Bai:2000:TSA**

[BE15] Åke Björck and Lars Eldén. Axel Ruhe 1942–2015. *BIT Numerical Mathematics*, 55(3): 621–623, September 2015. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://link.springer.com/article/10.1007/s10543-015-0579-4>; <http://link.springer.com/content/pdf/10.1007/s10543-015-0579-4.pdf>.

**Bjorck:2015:AR**

[BR01] Katarina Blom and Axel Ruhe. Information retrieval using very short Krylov sequences. In Michael W. Berry, editor, *Com-*

**Blom:2001:IRU**

<http://www.netlib.org/lapack/lawns/lawn106.pdf>. UT-CS-95-311, October 1995.

- putational information retrieval. Proceedings of the conference CIR '00, University of North Carolina, Raleigh, NC, USA, October 22, 2000*, pages 39–52. Society for Industrial and Applied Mathematics, Philadelphia, PA, USA, 2001.
- [BR05] **Blom:2005:KSM**  
Katarina Blom and Axel Ruhe. A Krylov subspace method for information retrieval. *SIAM Journal on Matrix Analysis and Applications*, 26(2):566–582, 2005. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/39226>.
- [ER80] **Ericsson:1980:STL**  
T. Ericsson and A. Ruhe. The spectral transformation Lanczos method for the numerical solution of large sparse generalized symmetric eigenvalue problems. *Math. Comp.*, 35:1251–1268, 1980.
- [ER82] **Ericsson:1982:SSP**  
Thomas Ericsson and Axel Ruhe. STLM — a software package for the spectral transformation Lanczos algorithm. Technical report, UMINF-101, 1982. 1–32 pp.
- [ER87] **Ericsson:1987:LAF**  
Thomas Ericsson and Axel Ruhe. Lanczos algorithms and field of value rotations for symmetric matrix pencils. *Linear Algebra and its Applications*, 88/89:733–746, 1987. CODEN LAAPAW.
- [GGL94] **Golub:1994:RAI**  
Gene Golub, Anne Greenbaum, and Mitchell Luskin, editors. *Recent advances in iterative methods*, volume 60 of *The IMA Volumes in Mathematics and its Applications*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1994. ISBN 0-387-94252-1. LCCN QA297.8 .R43 1994.
- [GKRV90] **Golub:1990:DVK**  
Gene Golub, Bo Kågström, Axel Ruhe, and Paul Van Dooren. Dedication to Vera N. Kublanovskaya on her 70th birthday. *SIAM Journal on Matrix Analysis and Applications*, 11(4):vii–??, October 1990. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).
- [HR90] **Huitfeldt:1990:NAN**  
Jacques Huitfeldt and Axel Ruhe. A new algorithm for numerical path following applied to an example from hydrodynamical flow. *SIAM J. Sci. Stat. Comp.*, 11(6):1181–1192, 1990. CODEN SIJCD4. ISSN 0196-5204.
- [KR80a] **Kaagstroem:1980:AJA**  
Bo Kågström and Axel Ruhe. Algorithm 560: JNF, an algorithm for numerical computation of the Jordan normal form of a complex matrix [F2]. *ACM Transactions on Mathematical Software*, 6(3):437–443, September 1980. CO-

- DEN ACMSCU. ISSN 0098-3500 (print), 1557-7295 (electronic).
- [KR80b] Bo Kågström and Axel Ruhe. An algorithm for numerical computation of the Jordan normal form of a complex matrix. *ACM Transactions on Mathematical Software*, 6(3):398–419, September 1980. CODEN ACMSCU. ISSN 0098-3500 (print), 1557-7295 (electronic).
- [KR83] Bo Kågström and Axel Ruhe, editors. *Matrix Pencils: Proceedings of a Conference Held at Pite Havsbud, Sweden, March 22–24, 1982*, volume 973 of *Lecture Notes in Mathematics*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1983. CODEN LNMAA2. ISBN 0-387-11983-3, 3-540-11983-3 (print), 3-540-39447-8 (e-book). ISSN 0075-8434 (print), 1617-9692 (electronic). LCCN QA3.L28 no. 973. URL <http://link.springer.com/book/10.1007/BFb0062089>; <http://www.springerlink.com/content/978-3-540-39447-1>.
- [OR06] K. Henrik A. Olsson and Axel Ruhe. Rational Krylov for eigenvalue computation and model order reduction. *BIT Numerical Mathematics*, 46(S-1):99–111, November 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- [RK78] A. Ruhe and B. Kågström. Numerical computation of matrix functions. *SIAM Review*, 20(3):634, ??? 1978. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).
- [RS98] Axel Ruhe and Daniel Skoogh. Rational Krylov algorithms for eigenvalue computation and model reduction. *Lecture Notes in Computer Science*, 1541:491–502, 1998. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic).
- [Ruh66a] Axel Ruhe. Algol programming: Eigenvalues of a complex matrix by the  $QR$ -method. *Nordisk tidskrift for informationsbehandling*, 6(4):350–358, July 1966. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=6&issue=4&spage=350>.
- [Ruh66b] Axel Ruhe. Eigenvalues of a complex matrix by the  $QR$ -method. *Nordisk tidskrift for informationsbehandling*, 6(??):350–358, 1966.
- [Ruh67] Axel Ruhe. On the quadratic convergence of the Jacobi method for normal matrices. *BIT*, 7(4):

- 305–313, 1967. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- [Ruh68] Axel Ruhe. On the quadratic convergence of a generalization of the Jacobi method to arbitrary matrices. *BIT*, 8(3): 210–231, 1968. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- [Ruh69] Axel Ruhe. The norm of a matrix after a similarity transformation. *BIT*, 9(1):53–58, 1969. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- [Ruh70a] A. Ruhe. *Algorithms for the non-symmetric algebraic eigenvalue problem*. Ph.D. thesis, Lund University, Lund, Sweden, 1970.
- [Ruh70b] A. Ruhe. Properties of a matrix with a very ill-conditioned eigenproblem. *Num. Math*, 15: 57–60, 1970. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic).
- [Ruh70c] Axel Ruhe. An algorithm for numerical determination of the structure of a general matrix. *BIT*, 10(2):196–216, 1970. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- [Ruh70d] Axel Ruhe. Perturbation bounds for means of eigenvalues and invariant subspaces. *BIT*, 10(3): 343–354, 1970. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- [Ruh73] Axel Ruhe. Algorithms for the nonlinear eigenvalue problem. *SIAM Journal on Numerical Analysis*, 10(4):674–689, September 1973. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).
- [Ruh74a] A. Ruhe. Iterative eigenvalue algorithms for large symmetric matrices. In L. Collatz and K. P. Hadeler, editors, *Eigenwertprobleme, ISNM 24*, volume 24, pages 97–115. Birkhäuser Verlag, Basel, 1974.
- [Ruh74b] A. Ruhe. Numerical computation of principal components when several observations are missing. Technical report, UMINF-48, Umeå, Sweden, 1974.
- [Ruh74c] A. Ruhe. SOR-methods for the eigenvalue problem of large sparse matrices. *Math. Comp.*, 28:695–710, 1974.
- [Ruh75a] A. Ruhe. Iterative eigenvalue algorithms based on convergent

- splittings. *J. Computational Physics*, 19:110–120, 1975.
- [Ruh75b] A. Ruhe. On the closeness of eigenvalues and singular values for almost normal matrices. *Linear Algebra and its Applications*, 11(1):87–93, 1975. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0024379575901196>.
- [Ruh76] A. Ruhe. Numerical methods for the solution of large sparse eigenvalue problems. In V. A. Barker, editor, *Sparse Matrix Techniques, Lect Notes Math 572*, pages 130–184. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1976.
- [Ruh77] Axel Ruhe. Computation of eigenvalues and eigenvectors. *Lecture Notes in Mathematics*, 572: 130–184, 1977. CODEN LN-MAA2. ISBN 3-540-08130-5 (print), 3-540-37430-2 (e-book). ISSN 0075-8434 (print), 1617-9692 (electronic). URL <http://link.springer.com/chapter/10.1007/BFb0116617/>.
- [Ruh79a] A. Ruhe. Implementation aspects of band Lanczos algorithms for computation of eigenvalues of large sparse symmetric matrices. *Math. Comp.*, 33:680–687, 1979.
- [Ruh79b] A. Ruhe. A universal elimination scheme for generalized linear least squares problems with equality constraints. Technical report, UMINF-74, 1979.
- [Ruh79c] Axel Ruhe. Accelerated Gauss–Newton algorithms for nonlinear least squares problems. *BIT*, 19(3):356–367, 1979. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- [Ruh80a] A. Ruhe. Eigenvalues in an APL environment, an algorithm based on Rayleigh quotient iteration. *APL Quote Quad*, 10(3): 29–30, 1980. CODEN APLQD9. ISSN 0163-6006 (print), 1558-3392 (electronic).
- [Ruh80b] A. Ruhe. Fitting empirical data by positive sums of exponentials. *SIAM J. Sci. Stat. Comp.*, 1: 481–498, 1980. CODEN SIJCD4. ISSN 0196-5204.
- [Ruh80c] A. Ruhe. Fitting empirical data by positive sums of exponentials. In M. M. Barritt and D. Wishart, editors, *COMPSTAT 1980: proceedings in computational statistics; 4th symposium held at Edinburgh 1980*, pages 622–628. Physica-Verlag, Vienna, Austria, 1980. ISBN 3-7908-0229-8. LCCN QA276.4 .C195.1980.



- Ruhe:1980:RBJ**
- [Ruh80d] Axel Ruhe. The relation between the Jacobi algorithm and inverse iteration and a Jacobi algorithm based on elementary reflections. *BIT*, 20(1):88–96, 1980. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- Ruhe:1982:MSL**
- [Ruh82] A. Ruhe. Mathematical software for linear algebra computations. Technical report, UMINF-95, 1982. 1–15 pp.
- Ruhe:1983:NAG**
- [Ruh83a] Axel Ruhe. Numerical aspects of Gram–Schmidt orthogonalization of vectors. *Linear Algebra and its Applications*, 52/53: 591–601, 1983. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).
- Ruhe:1983:TSA**
- [Ruh83b] Axel Ruhe. The two-sided Arnoldi algorithm for nonsymmetric eigenvalue problems. *Lecture Notes in Mathematics*, 973: 104–120, 1983. CODEN LNMAA2. ISBN 0-387-11983-3, 3-540-11983-3 (print), 3-540-39447-8 (e-book). ISSN 0075-8434 (print), 1617-9692 (electronic). URL <http://link.springer.com/chapter/10.1007/BFb0062097/>.
- Ruhe:1984:RKS**
- [Ruh84] Axel Ruhe. Rational Krylov sequence methods for eigenvalue computation. *Linear Algebra and its Applications*, 58:391–405, 1984. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).
- Ruhe:1987:CNM**
- [Ruh87] Axel Ruhe. Closest normal matrix finally found! *BIT*, 27(4): 585–598, 1987. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- Ruhe:1990:SER**
- [Ruh90] Axel Ruhe. Showing eigenvalues on the Riemann sphere. In Bo Kågström, editor, *Visualization and analysis of scientific and technical computations on high-performance computers*, pages 136–141. University of Umeå, Report UMINF-191.90, 1990.
- Ruhe:1993:RKA**
- [Ruh93] Axel Ruhe. The rational Krylov algorithm for generalized eigenvalue problems. In *92 Shanghai International Numerical Algebra and its applications Conference, Fudan University, Shanghai, October 26–30, 1992, to appear. ????, ????, 1993.*
- Ruhe:1994:CEF**
- [Ruh94a] Axel Ruhe. Carl-Erik Fröberg on his 75th birthday June 23, 1993. *BIT*, 34(1):i–ii, March 1994. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.mai.liu.se/BIT/contents/bit34.html>;

- <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=34&issue=1&spage=??>
- [Ruh94b] Axel Ruhe. The rational Krylov algorithm for nonsymmetric eigenvalue problems. III: Complex shifts for real matrices. *BIT*, 34(1):165–176, March 1994. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.mai.liu.se/BIT/contents/bit34.html>. **Ruhe:1994:RKAc** [Ruh96]
- [Ruh94c] Axel Ruhe. Rational Krylov algorithms for nonsymmetric eigenvalue problems. In Golub et al. [GGL94], pages 149–164. ISBN 0-387-94252-1. LCCN QA297.8.R43 1994. **Ruhe:1994:RKAA** [Ruh98]
- [Ruh94d] Axel Ruhe. Rational Krylov algorithms for nonsymmetric eigenvalue problems. II. Matrix pairs. *Linear Algebra and its Applications*, 197/198:283–295, 1994. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). Second Conference of the International Linear Algebra Society (ILAS) (Lisbon, 1992). **Ruhe:1994:RKAb** [Ruh00a]
- [Ruh95] Axel Ruhe. Book review: Polynomial and matrix computations. *Bulletin of the American Mathematical Society (new series)*, 32(3):357–360, 1995. CODEN BAMOAD. ISSN 0273-0979 (print), 1088-9485 (electronic). **Ruhe:1996:CNE**
- [Ruh96] Axel Ruhe. Computing nonlinear eigenvalues with spectral transformation Arnoldi. *Zeitschrift für Angewandte Mathematik und Mechanik*, 76:17–20, 1996. CODEN ZAMMAX. ISSN 0044-2267 (print), 1521-4001 (electronic). **Ruhe:1998:RKP**
- [Ruh98] Axel Ruhe. Rational Krylov: A practical algorithm for large sparse nonsymmetric matrix pencils. *SIAM Journal on Scientific Computing*, 19(5):1535–1551, 1998. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). **Ruhe:2000:RKAb**
- [Ruh00a] A. Ruhe. The rational Krylov algorithm for nonlinear matrix eigenvalue problems. *Journal of Mathematical Sciences (New York)*, 114(6):1854–1856, 2000. CODEN JMTSEW. ISSN 1072-3374 (print), 1573-8795 (electronic). URL <http://link.springer.com/article/10.1023/A:1022414805217>. **Ruhe:2000:RKAA**
- [Ruh00b] Axel Ruhe. A rational Krylov algorithm for nonlinear matrix eigenvalue problems. *Zap. Nauchn. Sem. S.-Peterburg. Otdel. Mat. Inst. Steklov. (POMI)*, 268(Chisl. Metody i Vopr. Organ. Vychisl. 14):176–180, 245–246, 2000. ISSN 0373-2703. En-

glish translation in *Journal of Mathematical Sciences*, **114**(6), 1854–1856 (April 2003).

**Ruhe:2003:Ea**

- [Ruh03a] Axel Ruhe. Editorial. *BIT Numerical Mathematics*, 43(1): v–viii, March 2003. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=43&issue=1&spage=??>.

**Ruhe:2003:Eb**

- [Ruh03b] Axel Ruhe. Editorial. *BIT Numerical Mathematics*, 43(2): iii, June 2003. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=43&issue=2&spage=??>.

**Ruhe:2004:ICI**

- [Ruh04] Axel Ruhe. Introduction to the contents of issue 44:4. *BIT Numerical Mathematics*, 44(4): 5, December 2004. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=44&issue=4&spage=5>.

**Ruhe:2005:ICId**

- [Ruh05a] Axel Ruhe. Introduction to the contents of issue 45:1. *BIT Numerical Mathematics*, 45(1):

??, March 2005. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=45&issue=1&spage=??>.

**Ruhe:2005:ICIB**

- [Ruh05b] Axel Ruhe. Introduction to the contents of issue 45:2. *BIT Numerical Mathematics*, 45(2): ??, June 2005. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=45&issue=2&spage=??>.

**Ruhe:2005:ICIC**

- [Ruh05c] Axel Ruhe. Introduction to the contents of issue 45:3. *BIT Numerical Mathematics*, 45(3):??, September 2005. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=45&issue=3&spage=??>.

**Ruhe:2005:ICId**

- [Ruh05d] Axel Ruhe. Introduction to the contents of issue 45:4. *BIT Numerical Mathematics*, 45(4):vii, December 2005. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=45&issue=4&spage=??>.

**Ruhe:2006:E**

- [Ruh06a] Axel Ruhe. Editorial. *BIT Numerical Mathematics*, 46(4):685–686, December 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).

**Ruhe:2006:ICIA**

- [Ruh06b] Axel Ruhe. Introduction to the contents of issue 46:1. *BIT Numerical Mathematics*, 46(1):3, March 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).

**Ruhe:2006:ICIB**

- [Ruh06c] Axel Ruhe. Introduction to the contents of issue 46:4. *BIT Numerical Mathematics*, 46(4):687–688, December 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).

**Ruhe:2006:P**

- [Ruh06d] Axel Ruhe. Preface. *BIT Numerical Mathematics*, 46(1):1, March 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).

**Ruhe:2007:Ea**

- [Ruh07a] Axel Ruhe. Editorial. *BIT Numerical Mathematics*, 47(3):483, September 2007. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=47&issue=3&spage=483>.

**Ruhe:2007:Eb**

- [Ruh07b] Axel Ruhe. Editorial. *BIT Numerical Mathematics*, 47(4):693–695, December 2007. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=47&issue=4&spage=693>.

**Ruhe:2007:ICIA**

- [Ruh07c] Axel Ruhe. Introduction to the Contents of Issue 47:2. *BIT Numerical Mathematics*, 47(2):239–240, June 2007. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=47&issue=2&spage=239>.

**Ruhe:2007:ICIB**

- [Ruh07d] Axel Ruhe. Introduction to the contents of issue 47:3. *BIT Numerical Mathematics*, 47(3):485–486, September 2007. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=47&issue=3&spage=485>.

**Ruhe:2007:ICIC**

- [Ruh07e] Axel Ruhe. Introduction to the Contents of Issue 47:4. *BIT Numerical Mathematics*, 47(4):697, December 2007. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (elec-

- tronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=47&issue=4&spage=697>. [Ruh08c]
- Ruhe:2007:PIC**
- [Ruh07f] Axel Ruhe. Preface and introduction to the contents of issue 47:1. *BIT Numerical Mathematics*, 47(1):1–2, March 2007. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=47&issue=1&spage=1>. [Ruh08d]
- Ruhe:2008:EGH**
- [Ruh08a] Axel Ruhe. Editorial: Gene Howard Golub in memoriam. *BIT Numerical Mathematics*, 48(1):1–2, March 2008. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=48&issue=1&spage=1>. [Ruh09a]
- Ruhe:2008:ICIA**
- [Ruh08b] Axel Ruhe. Introduction to the contents of issue 48:1. *BIT Numerical Mathematics*, 48(1):3, March 2008. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=48&issue=1&spage=3>. [Ruh09b]
- Ruhe:2008:ICIB**
- Axel Ruhe. Introduction to the contents of issue 48:3. *BIT Numerical Mathematics*, 48(3):423–424, September 2008. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=48&issue=3&spage=423>.
- Ruhe:2008:ICIC**
- Axel Ruhe. Introduction to the contents of issue 48:4. *BIT Numerical Mathematics*, 48(4):649–650, December 2008. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=48&issue=4&spage=649>.
- Ruhe:2009:CV**
- Axel Ruhe. Collaborators for volume 49. *BIT Numerical Mathematics*, 49(4):641–643, December 2009. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=49&issue=4&spage=641>.
- Ruhe:2009:ICIA**
- Axel Ruhe. Introduction to the contents of issue 49:2. *BIT Numerical Mathematics*, 49(2):247–248, June 2009. CODEN BITTEL, NBITAB. ISSN 0006-

- 3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=49&issue=2&spage=247>. **Ruhe:2010:Eb**
- [Ruh09c] Axel Ruhe. Introduction to the contents of issue 49:3. *BIT Numerical Mathematics*, 49(3):475–476, September 2009. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=49&issue=3&spage=475>. **Ruhe:2009:IC1b**
- [Ruh09d] Axel Ruhe. Preface and introduction to the contents of issue 49:1. *BIT Numerical Mathematics*, 49(1):1–2, March 2009. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=49&issue=1&spage=1>. **Ruhe:2009:PIC**
- [Ruh10a] Axel Ruhe. Editorial. *BIT Numerical Mathematics*, 50(3):451–453, September 2010. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=50&issue=3&spage=451>. **Ruhe:2010:Ea**
- [Ruh10b] Axel Ruhe. Editorial. *BIT Numerical Mathematics*, 50(4):689–692, December 2010. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=50&issue=4&spage=689>. **Ruhe:2010:IC1a**
- [Ruh10c] Axel Ruhe. Introduction to the contents of issue 50:1. *BIT Numerical Mathematics*, 50(1):1–2, March 2010. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=50&issue=1&spage=1>. **Ruhe:2010:IC1b**
- [Ruh10d] Axel Ruhe. Introduction to the contents of issue 50:2. *BIT Numerical Mathematics*, 50(2):221–222, June 2010. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=50&issue=2&spage=221>. **Ruhe:2010:IC1c**
- [Ruh10e] Axel Ruhe. Rational Krylov for real pencils with complex eigenvalues. *Taiwanese Journal of Mathematics*, 14(3A):795–803, 2010. ISSN 1027-5487. **Ruhe:2010:RKR**

**Ruhe:2011:B**

- [Ruh11a] Axel Ruhe. BIT50. *BIT Numerical Mathematics*, 51(1):1–5, March 2011. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=51&issue=1&spage=1>.

**Ruhe:2011:E**

- [Ruh11b] Axel Ruhe. Editorial. *BIT Numerical Mathematics*, 51(4):777–780, December 2011. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=51&issue=4&spage=777>.

**Ruhe:2011:ICIA**

- [Ruh11c] Axel Ruhe. Introduction to the contents of issue 51:2. *BIT Numerical Mathematics*, 51(2):251–252, June 2011. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=51&issue=2&spage=251>.

**Ruhe:2011:ICIB**

- [Ruh11d] Axel Ruhe. Introduction to the contents of issue 51:3. *BIT Numerical Mathematics*, 51(3):481–482, September 2011. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=51&issue=3&spage=481>.

[springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=51&issue=3&spage=481](http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=51&issue=3&spage=481).

**Ruhe:2012:E**

- [Ruh12a] Axel Ruhe. Editorial. *BIT Numerical Mathematics*, 52(4):797–800, December 2012. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://link.springer.com/article/10.1007/s10543-012-0408-y>; <http://link.springer.com/content/pdf/10.1007/s10543-012-0408-y>.

**Ruhe:2012:ICIC**

- [Ruh12b] Axel Ruhe. Introduction to the contents of issue 52:2. *BIT Numerical Mathematics*, 52(2):271–272, June 2012. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=52&issue=2&spage=271>.

**Ruhe:2012:ICID**

- [Ruh12c] Axel Ruhe. Introduction to the contents of issue 52:3. *BIT Numerical Mathematics*, 52(3):537–538, September 2012. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=52&issue=3&spage=537>.

**Ruhe:2012:PB**

- [Ruh12d] Axel Ruhe. Preface to BIT 52:1. *BIT Numerical Mathematics*, 52(1):1–2, March 2012. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=52&issue=1&spage=1>. [Ruh13d]

**Ruhe:2013:PBa**

- [Ruh13a] Axel Ruhe. Preface to BIT 53:1. *BIT Numerical Mathematics*, 53(1):1–2, March 2013. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://link.springer.com/article/10.1007/s10543-013-0427-3>; <http://link.springer.com/content/pdf/10.1007/s10543-013-0427-3>.

**Ruhe:2013:PBb**

- [Ruh13b] Axel Ruhe. Preface to BIT 53:2. *BIT Numerical Mathematics*, 53(2):283–284, June 2013. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://link.springer.com/article/10.1007/s10543-013-0428-2>; <http://link.springer.com/content/pdf/10.1007/s10543-013-0428-2.pdf>.

**Ruhe:2013:PBc**

- [Ruh13c] Axel Ruhe. Preface to BIT 53:3. *BIT Numerical Mathematics*, 53(3):565–566, September 2013. CODEN BITTEL, NBITAB.

ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://link.springer.com/article/10.1007/s10543-013-0440-6>; <http://link.springer.com/content/pdf/10.1007/s10543-013-0440-6.pdf>.

**Ruhe:2013:PBd**

Axel Ruhe. Preface to BIT 53:4. *BIT Numerical Mathematics*, 53(4):821–825, December 2013. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://link.springer.com/article/10.1007/s10543-013-0456-y>; <http://link.springer.com/content/pdf/10.1007/s10543-013-0456-y.pdf>.

**Ruhe:2014:P**

- [Ruh14a] Axel Ruhe. Preface to 54:3. *BIT Numerical Mathematics*, 54(3):585–586, September 2014. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://link.springer.com/article/10.1007/s10543-014-0518-9>; <http://link.springer.com/content/pdf/10.1007/s10543-014-0518-9.pdf>.

**Ruhe:2014:PBa**

- [Ruh14b] Axel Ruhe. Preface to BIT 54:2. *BIT Numerical Mathematics*, 54(2):303–304, June 2014. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://link.springer.com/article/10.1007/s10543-014-0504-2>;



[http://link.springer.com/  
content/pdf/10.1007/s10543-  
014-0504-2.pdf](http://link.springer.com/content/pdf/10.1007/s10543-014-0504-2.pdf).

**Ruhe:2014:PBb**

- [Ruh14c] Axel Ruhe. Preface to BIT 54:4. *BIT Numerical Mathematics*, 54(4):867–871, December 2014. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://link.springer.com/article/10.1007/s10543-014-0535-8>; <http://link.springer.com/content/pdf/10.1007/s10543-014-0535-8.pdf>.

**Ruhe:1972:MCG**

- [RW72] Axel Ruhe and T. Wiberg. The method of conjugate gradients used in inverse iteration. *BIT*, 12(4):543–554, 1972. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).

**Ruhe:1980:ASN**

- [RW80] Axel Ruhe and Per Åke Wedin. Algorithms for separable non-linear least squares problems. *SIAM Review*, 22(3):318–337, July 1980. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

**Wold:1984:CPL**

- [WRWD84] S. Wold, A. Ruhe, H. Wold, and W. J. Dunn. The collinearity problem in linear regression. the partial least squares (PLS) approach to generalized inverses. *SIAM J. Sci. Stat. Comp.*, 5:735–743, 1984. CODEN SIJCD4. ISSN 0196-5204.

**Zhou:1986:NPF**

- [ZR86] Yong Feng Zhou and Axel Ruhe. Numerical path following and eigenvalue criteria for branch switching. In J. Cullum and R. A. Willoughby, editors, *Large Scale Eigenvalue Problems*, pages 121–142. Elsevier Science Publishers (North-Holland), New York, NY, USA, 1986.