

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

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## Abstract

This bibliography records publications of Axel Ruhe.

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

## Title word cross-reference

**QR** [Ruh66a, Ruh66b].

**Accelerated** [Ruh79c]. **advances** [GGL94].  
**after** [Ruh69]. **Algebra** [BDD<sup>+</sup>95, Ruh82].  
**algebraic** [BDDR00, Ruh70a]. **Algol**

-method [Ruh66a, Ruh66b].

[Ruh66a]. **Algorithm**  
[KR80a, KR80b, Ruh70c, Ruh80d, Ruh98,  
ER82, HR90, Ruh80a, Ruh83b, Ruh93,  
Ruh94b, Ruh00b, Ruh00a]. **Algorithms**  
[ER87, MC87, Ruh70a, Ruh73, Ruh79c,  
Ruh79a, RW80, RS98, Ruh74a, Ruh75a,  
Ruh94c, Ruh94d, MC87]. **almost** [Ruh75b].  
**APL** [Ruh80a]. **applied** [HR90]. **approach**

**1** [Ruh12d, Ruh13a]. **1982** [KR83]. **1985**  
[MC87]. **1993** [Ruh94a].

[WRWD84]. **approximation** [MC87].  
**Arbitrary** [Ruh68]. **Arnoldi**  
[Ruh83b, Ruh96]. **Aspects**

**2** [Ruh13b, Ruh14b].

[Ruh79a, Ruh83a]. **Axel** [BE15].  
**Band** [Ruh79a]. **Based**  
[Ruh80d, MC87, Ruh75a, Ruh80a].

**3** [Ruh13c].

**Between** [Ruh80d]. **Birthday**  
[GKRV90, Ruh94a]. **BIT** [Ruh12d, Ruh13a,  
Ruh13b, Ruh13c, Ruh13d, Ruh14b, Ruh14c].

**4** [Ruh13d].

**54-3** [Ruh14a].

**BIT50** [Ruh11a]. **Book** [Ruh95]. **Bounds** [Ruh70d]. **branch** [ZR86].

**Carl** [Ruh94a]. **Carl-Erik** [Ruh94a].  
**chemistry** [AHR87]. **closeness** [Ruh75b].  
**Closest** [Ruh87]. **Collaborators** [Ruh09a].  
**College** [MC87]. **collinearity** [WRWD84].  
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[Ruh74b]. **Computation**  
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Ruh84, RS98, OR06, Ruh74b].  
**Computations** [Ruh82, Ruh95].  
**Computing** [Ruh96]. **conditioned**  
[Ruh70b]. **Conference** [KR83, MC87].  
**conjugate** [RW72]. **constants** [AHR87].  
**constraints** [Ruh79b]. **Contents**  
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Ruh10c, Ruh10d, Ruh11c, Ruh11d, Ruh12b,  
Ruh12c, Ruh07c, Ruh07e]. **Convergence**  
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**criteria** [ZR86].

**Data** [MC87, Ruh80b, Ruh80c]. **Dedication**  
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[Ruh03a, Ruh03b, Ruh06a, Ruh07a, Ruh07b,  
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**equality** [Ruh79b]. **Erik** [Ruh94a].  
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**Gauss** [Ruh79c]. **Gene** [Ruh08a]. **General**  
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Ruh11d, Ruh12b, Ruh12c]. **Invariant**  
[Ruh70d]. **Inverse** [Ruh80d, RW72].

**inverses** [WRWD84]. **Issue**  
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Ruh12c, Ruh07c, Ruh07e]. **Iteration**  
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[Ruh74a, Ruh75a, GGL94].

**Jacobi** [Ruh67, Ruh68, Ruh80d]. **JNF**  
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[MC87]. **June** [Ruh94a].

**Krylov** [BR01, BR05, OR06, Ruh84, Ruh93,

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**March** [KR83]. **Mathematical** [Ruh82]. **Matrices** [Ruh67, Ruh68, Ruh79a, Ruh74a, Ruh74c, Ruh75b, Ruh94b]. **Matrix** [ER87, KR80a, KR80b, Ruh69, Ruh70c, RK78, Ruh98, Ruh66a, Ruh66b, Ruh70b, Ruh87, Ruh95, Ruh00b, Ruh00a, KR83, Ruh94d]. **Means** [Ruh70d]. **memoriam** [Ruh08a]. **Method** [Ruh67, Ruh68, BR05, ER80, Ruh66a, Ruh66b, RW72]. **Methods** [Ruh84, GGL94, Ruh74c, Ruh76]. **Military** [MC87]. **missing** [Ruh74b]. **Model** [RS98, OR06].

**N** [GKRV90]. **Newton** [Ruh79c]. **Nonlinear** [Ruh73, Ruh79c, RW80, Ruh96, Ruh00b, Ruh00a]. **Nonsymmetric** [Ruh98, Ruh70a, Ruh83b, Ruh94c, Ruh94d, Ruh94b]. **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** [Ruh98, BDDR00]. **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, MC87]. **programming** [Ruh66a]. **Properties** [Ruh70b].

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

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**scheme** [Ruh79b]. **Schmidt** [Ruh83a]. **Science** [MC87]. **Separable** [RW80]. **Sequence** [Ruh84]. **sequences** [BR01]. **several** [Ruh74b]. **shifts** [Ruh94b]. **short** [BR01]. **Showing** [Ruh90]. **Shrivenham** [MC87]. **sided** [Ruh83b]. **Similarity** [Ruh69]. **singular** [Ruh75b]. **Software** [Ruh82, ER82]. **solution** [AHR87, BDDR00, ER80, Ruh76]. **SOR** [Ruh74c]. **SOR-methods** [Ruh74c]. **Sparse** [Ruh79a, Ruh98, ER80, Ruh74c, Ruh76]. **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].

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**Transformation**  
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**Value** [ER87]. **values** [Ruh75b]. **Vectors**  
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Ruh70b]. **volume** [Ruh09a].

## References

- |                       |   |  |  |
|-----------------------|---|--|--|
|                       | <b>Andersson:1987:CFC</b>   |  |  |
| [AHR87]               | L. Andersson, K. Holmström, and A. Ruhe. Complex formation constants — a problem from solution chemistry. In Mason and Cox [MC87], pages 557–572. ISBN 0-19-853612-7. LCCN QA221 .A5361 1987; QA221 .I47 1985. US\$90.  | [BDDR00]   | Zhaojun Bai, James Demmel, Jack Dongarra, and Axel Ruhe, editors. <i>Templates for the solution of algebraic eigenvalue problems: a practical guide</i> . 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 <a href="http://www.loc.gov/catdir/enhancements/fy0726/00059507-d.html">http://www.loc.gov/catdir/enhancements/fy0726/00059507-d.html</a> ; <a href="http://www.loc.gov/catdir/enhancements/fy0726/00059507-t.html">http://www.loc.gov/catdir/enhancements/fy0726/00059507-t.html</a> . A practical guide. |
| [BBRZ02]              | Jesse L. Barlow, Michael W. Berry, Axel Ruhe, and Hongyuan Zha. Preface. <i>Computational Statistics &amp; Data Analysis</i> , 41(1): 1–2, November 28, 2002. CODEN CSDADW. ISSN 0167-9473 (print), 1872-7352 (electronic). URL <a href="http://www.sciencedirect.com/science/article/pii/S0167947302002049">http://www.sciencedirect.com/science/article/pii/S0167947302002049</a> . | [BE15]   | <b>Barlow:2002:P</b>   |
| [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  | [Bai:1995:TLAA]  | <b>Bai:1995:TLAA</b>   |
|                       |   | [Bjorck:2015:AR]   |  |
|                       |   | Åke Björck and Lars Eldén. Axel Ruhe 1942–2015. <i>BIT Numerical Mathematics</i> , 55(3): 621–623, September 2015. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://link.springer.com/article/10.1007/s10543-015-0579-4">http://link.springer.com/article/10.1007/s10543-015-0579-4</a> ; <a href="http://link.springer.com/content/pdf/10.1007/s10543-015-0579-4.pdf">http://link.springer.com/content/pdf/10.1007/s10543-015-0579-4.pdf</a> . | [Bjorck:2015:AR]   |

- |   |   |
|---|---|
| <div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Blom:2001:IRU</b></div> <p>[BR01] Katarina Blom and Axel Ruhe. Information retrieval using very short Krylov sequences. In Michael W. Berry, editor, <i>Computational information retrieval. Proceedings of the conference CIR '00, University of North Carolina, Raleigh, NC, USA, October 22, 2000</i>, pages 39–52. Society for Industrial and Applied Mathematics, Philadelphia, PA, USA, 2001.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Blom:2005:KSM</b></div> <p>[BR05] Katarina Blom and Axel Ruhe. A Krylov subspace method for information retrieval. <i>SIAM Journal on Matrix Analysis and Applications</i>, 26(2):566–582, 2005. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <a href="http://pubs.siam.org/sam-bin/dbq/article/39226">http://pubs.siam.org/sam-bin/dbq/article/39226</a>.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Ericsson:1980:STL</b></div> <p>[ER80] T. Ericsson and A. Ruhe. The spectral transformation Lanczos method for the numerical solution of large sparse generalized symmetric eigenvalue problems. <i>Mathematics of Computation</i>, 35: 1251–1268, 1980.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Ericsson:1982:SSP</b></div> <p>[ER82] Thomas Ericsson and Axel Ruhe. STLM — a software package for the spectral transformation Lanczos algorithm. Technical report, UMINF-101, 1982. 1–32 pp.</p> | <div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Ericsson:1987:LAF</b></div> <p>[ER87] Thomas Ericsson and Axel Ruhe. Lanczos algorithms and field of value rotations for symmetric matrix pencils. <i>Linear Algebra and its Applications</i>, 88/89:733–746, 1987. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Golub:1994:RAI</b></div> <p>[GGL94] Gene Golub, Anne Greenbaum, and Mitchell Luskin, editors. <i>Recent advances in iterative methods</i>, volume 60 of <i>The IMA Volumes in Mathematics and its Applications</i>. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1994. ISBN 0-387-94252-1. LCCN QA297.8 .R43 1994.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Golub:1990:DVK</b></div> <p>[GKRV90] Gene Golub, Bo Kågström, Axel Ruhe, and Paul Van Dooren. Dedication to Vera N. Kublanovskaya on her 70th birthday. <i>SIAM Journal on Matrix Analysis and Applications</i>, 11(4):vii–??, October 1990. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Huitfeldt:1990:NAN</b></div> <p>[HR90] Jacques Huitfeldt and Axel Ruhe. A new algorithm for numerical path following applied to an example from hydrodynamical flow. <i>SIAM J. Sci. Stat. Comp.</i>, 11(6): 1181–1192, 1990. CODEN SJCD4. ISSN 0196-5204.</p> |
|---|---|

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|---|---|
| <p><b>Kaagstroem:1980:AJA</b></p> <p>[KR80a] Bo Kågström and Axel Ruhe. Algorithm 560: JNF, an algorithm for numerical computation of the Jordan normal form of a complex matrix [F2]. <i>ACM Transactions on Mathematical Software</i>, 6(3): 437–443, September 1980. CODEN ACMSCU. ISSN 0098-3500 (print), 1557-7295 (electronic).</p> <p><b>Kaagstroem:1980:ANC</b></p> <p>[KR80b] Bo Kågström and Axel Ruhe. An algorithm for numerical computation of the Jordan normal form of a complex matrix. <i>ACM Transactions on Mathematical Software</i>, 6(3):398–419, September 1980. CODEN ACMSCU. ISSN 0098-3500 (print), 1557-7295 (electronic).</p> <p><b>Kaagstrom:1983:MPP</b></p> <p>[KR83] Bo Kågström and Axel Ruhe, editors. <i>Matrix Pencils: Proceedings of a Conference Held at Pite Havsbad, Sweden, March 22–24, 1982</i>, volume 973 of <i>Lecture Notes in Mathematics</i>. 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 <a href="http://link.springer.com/book/10.1007/BFb0062089">http://link.springer.com/book/10.1007/BFb0062089</a>; <a href="http://www.springerlink.com/content/978-3-540-39447-1">http://www.springerlink.com/content/978-3-540-39447-1</a>.</p> | <p><b>Mason:1987:AAB</b></p> <p>[MC87] J. C. Mason and M. G. Cox, editors. <i>Algorithms for approximation: based on the proceedings of the IMA Conference on Algorithms for the Approximation of Functions and Data, held at the Royal Military College of Science, Shrivenham, July 1985</i>, volume 10 of <i>The Institute of Mathematics and Its Applications conference series, new series</i>. Clarendon Press, Oxford, UK, 1987. ISBN 0-19-853612-7. LCCN QA221 .A5361 1987; QA221 .I47 1985. US\$90.</p> <p><b>Olsson:2006:RKE</b></p> <p>[OR06] K. Henrik A. Olsson and Axel Ruhe. Rational Krylov for eigenvalue computation and model order reduction. <i>BIT Numerical Mathematics</i>, 46(S-1):99–111, November 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).</p> <p><b>Ruhe:1978:NCM</b></p> <p>[RK78] A. Ruhe and B. Kågstrom. Numerical computation of matrix functions. <i>SIAM Review</i>, 20(3):634, ??? 1978. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).</p> <p><b>Ruhe:1998:RKA</b></p> <p>[RS98] Axel Ruhe and Daniel Skoogh. Rational Krylov algorithms for eigenvalue computation and model reduction. <i>Lecture Notes in Computer Science</i>, 1541:491–502, 1998. CODEN LNCSD9.</p> |
|---|---|

- ISSN 0302-9743 (print), 1611-3349 (electronic).
- Ruhe:1966:APE**
- [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>.
- Ruhe:1966:ECM**
- [Ruh66b] Axel Ruhe. Eigenvalues of a complex matrix by the *QR*-method. *Nordisk tidskrift for informationsbehandling*, 6(?):350–358, 1966.
- Ruhe:1967:QCJ**
- [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).
- Ruhe:1968:QCG**
- [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).
- Ruhe:1969:NMA**
- [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).
- Ruhe:1970:ANA**
- A. Ruhe. *Algorithms for the non-symmetric algebraic eigenvalue problem*. Ph.D. thesis, Lund University, Lund, Sweden, 1970.
- Ruhe:1970:PMV**
- 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).
- Ruhe:1970:AND**
- 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).
- Ruhe:1970:PBM**
- 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).
- Ruhe:1973:ANE**
- 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).
- Ruhe:1974:NMS**
- [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.
- Ruhe:1974:IEA**
- [Ruh74b] A. Ruhe. Numerical computation of principal components when several observations are missing. Technical report, UMINF-48, Umeå, Sweden, 1974.
- Ruhe:1974:SME**
- [Ruh74c] A. Ruhe. SOR-methods for the eigenvalue problem of large sparse matrices. *Mathematics of Computation*, 28:695–710, 1974.
- Ruhe:1975:IEA**
- [Ruh75a] A. Ruhe. Iterative eigenvalue algorithms based on convergent splittings. *J. Computational Physics*, 19:110–120, 1975.
- Ruhe:1975:CES**
- [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>.
- Ruhe:1976:NMS**
- 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.
- Ruhe:1977:CEE**
- Axel Ruhe. Computation of eigenvalues and eigenvectors. *Lecture Notes in Mathematics*, 572: 130–184, 1977. CODEN LNMAA2. 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/>.
- Ruhe:1979:IAB**
- A. Ruhe. Implementation aspects of band Lanczos algorithms for computation of eigenvalues of large sparse symmetric matrices. *Mathematics of Computation*, 33: 680–687, 1979.
- Ruhe:1979:UES**
- A. Ruhe. A universal elimination scheme for generalized linear least squares problems with equality constraints. Technical report, UMINF-74, 1979.
- Ruhe:1979:AGN**
- Axel Ruhe. Accelerated Gauss–Newton algorithms for nonlinear least squares problems. *BIT*, 19 (3):356–367, 1979. CODEN BIT-
- [Ruh79c]

- TEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
- Ruhe:1980:EAE**
- [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).
- Ruhe:1980:FEDA**
- [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.
- Ruhe:1980:FEDb**
- [Ruh80c] A. Ruhe. Fitting empirical data by positive sums of exponentials. In M. M. Barratt 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).
- [Ruh82] A. Ruhe. Mathematical software for linear algebra computations. Technical report, UMINF-95, 1982. 1–15 pp.
- Ruhe:1982:MSL**
- [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:NAG**
- [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:1983:TSA**
- [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:1984:RKS**
- [Ruh87] Axel Ruhe. Closest normal matrix finally found! *BIT*, 27(4):
- Ruhe:1987:CNM**

- 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.mail.liu.se/BIT/contents/bit34.html>; <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=34&issue=1&spage=??>.
- Ruhe:1994:RKAc**
- [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.mail.liu.se/BIT/contents/bit34.html>.
- Ruhe:1994:RKAa**
- [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:RKAb**
- [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:1995:BRP**
- [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. CO-

- DEN 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, September 1998. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://pubs.siam.org/sam-bin/dbq/article/28559>.
- 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. English 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:ICIA**
- [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=??>.

	<b>Ruhe:2005:IC Ib</b>	<b>Ruhe:2006:IC Ia</b>
[Ruh05b]	Axel Ruhe. Introduction to the contents of issue 45:2. <i>BIT Numerical Mathematics</i> , 45(2):??, June 2005. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=45&amp;issue=2&amp;spage=??">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=45&amp;issue=2&amp;spage=??</a> .	[Ruh06b] Axel Ruhe. Introduction to the contents of issue 46:1. <i>BIT Numerical Mathematics</i> , 46(1):3, March 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
	<b>Ruhe:2005:IC Ic</b>	<b>Ruhe:2006:IC Ib</b>
[Ruh05c]	Axel Ruhe. Introduction to the contents of issue 45:3. <i>BIT Numerical Mathematics</i> , 45(3):??, September 2005. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=45&amp;issue=3&amp;spage=??">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=45&amp;issue=3&amp;spage=??</a> .	Axel Ruhe. Introduction to the contents of issue 46:4. <i>BIT Numerical Mathematics</i> , 46(4):687–688, December 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
	<b>Ruhe:2005:IC Id</b>	<b>Ruhe:2006:P</b>
[Ruh05d]	Axel Ruhe. Introduction to the contents of issue 45:4. <i>BIT Numerical Mathematics</i> , 45(4):vii, December 2005. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=45&amp;issue=4&amp;spage=??">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=45&amp;issue=4&amp;spage=??</a> .	Axel Ruhe. Preface. <i>BIT Numerical Mathematics</i> , 46(1):1, March 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).
	<b>Ruhe:2006:E</b>	<b>Ruhe:2007:Ea</b>
[Ruh06a]	Axel Ruhe. Editorial. <i>BIT Numerical Mathematics</i> , 46(4):685–686, December 2006. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).	[Ruh07a] Axel Ruhe. Editorial. <i>BIT Numerical Mathematics</i> , 47(3):483, September 2007. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=47&amp;issue=3&amp;spage=483">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=47&amp;issue=3&amp;spage=483</a> .
	<b>Ruhe:2007:Eb</b>	
[Ruh07b]		Axel Ruhe. Editorial. <i>BIT Numerical Mathematics</i> , 47(4):693–695, December 2007. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www">http://www</a> .

- [springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=47&issue=4&spage=693.](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 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=47&issue=4&spage=697>.
- 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>.
- Ruhe:2008:EGH**
- 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>.
- Ruhe:2008:ICIA**
- 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>.
- 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>.

- genre=article&issn=0006-3835&  
volume=48&issue=3&spage=423.
- Ruhe:2008:ICic**
- [Ruh08d] 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=3&spage=423>.
- Ruhe:2009:CV**
- [Ruh09a] 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**
- [Ruh09b] 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:2009:ICIB**
- [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:PIC**
- 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:2010:Ea**
- [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:Eb**
- 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>.

- |  |  |
|--|--|
| <div style="text-align: center; border: 1px solid black; padding: 5px;"><b>Ruhe:2010:ICIA</b></div> <p>[Ruh10c] Axel Ruhe. Introduction to the contents of issue 50:1. <i>BIT Numerical Mathematics</i>, 50(1):1–2, March 2010. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=50&amp;issue=1&amp;spage=1">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=50&amp;issue=1&amp;spage=1</a>.</p> <div style="text-align: center; border: 1px solid black; padding: 5px;"><b>Ruhe:2010:ICIB</b></div> <p>[Ruh10d] Axel Ruhe. Introduction to the contents of issue 50:2. <i>BIT Numerical Mathematics</i>, 50(2):221–222, June 2010. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=50&amp;issue=2&amp;spage=221">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=50&amp;issue=2&amp;spage=221</a>.</p> <div style="text-align: center; border: 1px solid black; padding: 5px;"><b>Ruhe:2010:RK</b></div> <p>[Ruh10e] Axel Ruhe. Rational Krylov for real pencils with complex eigenvalues. <i>Taiwanese Journal of Mathematics</i>, 14(3A):795–803, 2010. ISSN 1027-5487.</p> <div style="text-align: center; border: 1px solid black; padding: 5px;"><b>Ruhe:2011:B</b></div> <p>[Ruh11a] Axel Ruhe. BIT50. <i>BIT Numerical Mathematics</i>, 51(1):1–5, March 2011. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=51&amp;issue=1&amp;spage=1">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=51&amp;issue=1&amp;spage=1</a>.</p> | <div style="text-align: center; border: 1px solid black; padding: 5px;"><b>Ruhe:2011:E</b></div> <p>[Ruh11b] Axel Ruhe. Editorial. <i>BIT Numerical Mathematics</i>, 51(4):777–780, December 2011. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=51&amp;issue=4&amp;spage=777">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=51&amp;issue=4&amp;spage=777</a>.</p> <div style="text-align: center; border: 1px solid black; padding: 5px;"><b>Ruhe:2011:ICIB</b></div> <p>[Ruh11c] Axel Ruhe. Introduction to the contents of issue 51:2. <i>BIT Numerical Mathematics</i>, 51(2):251–252, June 2011. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=51&amp;issue=2&amp;spage=251">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=51&amp;issue=2&amp;spage=251</a>.</p> <div style="text-align: center; border: 1px solid black; padding: 5px;"><b>Ruhe:2011:RK</b></div> <p>[Ruh11d] Axel Ruhe. Introduction to the contents of issue 51:3. <i>BIT Numerical Mathematics</i>, 51(3):481–482, September 2011. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=51&amp;issue=3&amp;spage=481">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=51&amp;issue=3&amp;spage=481</a>.</p> <div style="text-align: center; border: 1px solid black; padding: 5px;"><b>Ruhe:2012:E</b></div> <p>[Ruh12a] Axel Ruhe. Editorial. <i>BIT Numerical Mathematics</i>, 52(4):797–800, December 2012. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <a href="http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=52&amp;issue=4&amp;spage=797">http://www.springerlink.com/openurl.asp?genre=article&amp;issn=0006-3835&amp;volume=52&amp;issue=4&amp;spage=797</a>.</p> |
|--|--|

- link.springer.com/article/10.1007/s10543-012-0408-y; <http://link.springer.com/content/pdf/10.1007/s10543-012-0408-y>. [Ruh13a]
- 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>. [Ruh13b]
- 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>. [Ruh13c]
- 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**
- 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**
- 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**
- 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>. [RW72]
- 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>. [RW80]
- 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>. [ZR86]
- 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**
- 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**
- 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**
- 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.