

Books

1. Å. Björck, *Numerical Methods in Matrix Computations*, Texts in Applied Mathematics, Springer Verlag, London, 2014. to appear
2. G. Dahlquist and Å. Björck. *Numerical Methods and Scientific Computing*. Vol. I SIAM, Philadelphia, 2008. xxvii+717 pp., ISBN 0-89871-360-9
3. Å. Björck, *Numerical Methods for Least Squares Problems*, SIAM, Philadelphia, 1996. xvii+408 pp., ISBN 978-0-898716-44-3
4. G. Dahlquist and Å. Björck. *Metody Numeryczne*. Panstwowe Wydawnictwe Naukowe, 1987. 546 pp., ISBN 83-01-04276-1
5. Å. Björck, R. J. Plemmons and H. Schneider (editors.), *Large Scale Matrix Problems*, North-Holland, 1981.
6. G. Dahlquist and Å. Björck. *Numerical Methods*. Prentice-Hall, Englewood Cliffs, 1974. xvii+573 pp. ISBN 0-13-627315-7. (Translated into Chinese 1990). Reprinted by Dover Publ. Inc., 2003, ISBN 0-486-42807-9
7. Å. Björck and G. Dahlquist, *Numerische Methoden*, R. Oldenbourg Verlag, München, 1972, 374 pp., ISBN 3-486-33851-X,
8. Å. Björck and G. Dahlquist, *Numeriska Metoder*, Gleerups, Lund, 1969. viii+373 pp.

Journal Publications

1. Å. Björck. Stability of two direct methods for bidiagonalization and partial least squares. *SIAM J. Matrix Anal. Appl.*, 35(1):279–291, 2014.
2. S. J. Leon, Å. Björck, and W. Gander. Gram–Schmidt orthogonalization: 100 years and more. *Numer. Linear Algebra Appl.*, 20:492–532, 2013.
3. Å. Björck. The calculation of linear least squares problems. *Acta Numerica*, 13:1–54, 2004.
4. M. Adlers and Å. Björck. Matrix stretching for sparse least squares problems. *Numer. Linear Algebra Appl.*, 7:51–65, 2000.
5. Å. Björck, P. Heggernes, and P. Matstoms. Methods for large scale total least squares problems. *SIAM J. Matrix Anal. Appl.*, 22:413–429, 2000.
6. Å. Björck and J. Y. Yuan. Preconditioners for least squares problems by LU factorization. *Electronic Trans. Numer. Anal.*, 8:26–35, 1998.

7. Å. Björck, T. Elfving, and Z. Strakoš. Stability of conjugate gradient and Lanczos methods for linear least squares problems. *SIAM J. Matrix Anal. Appl.*, submitted, 1996.
8. Å. Björck and C. C. Paige. Solution of augmented linear systems using orthogonal factorizations. *BIT*, 34:1–26, 1994.
9. Å. Björck. Numerics of Gram-Schmidt orthogonalization. *Linear Algebra Appl.*, 197–198:297–316, 1994.
10. Å. Björck, L. Eldén, and H. Park. Accurate downdating of least squares solutions. *SIAM J. Matrix Anal. Appl.*, 15:549–568, 1994.
11. Å. Björck, E. Grimme, and P. Van Dooren. An implicit shift bidiagonalization algorithm for ill-posed systems. *BIT*, 34:510–534, 1994.
12. Å. Björck and C. C. Paige. Loss and recapture of orthogonality in the modified Gram-Schmidt algorithm. *SIAM J. Matrix Anal. Appl.*, 13:176–190, 1992.
13. Å. Björck. Component-wise perturbation analysis and errors bounds for linear least square solutions. *BIT*, 31:238–244, 1991.
14. Å. Björck and Z. Zlatev. Exploiting the separability in the solution of systems of linear ordinary differential equations. *Computers and Mathematics with Applications*, pages 421–438, 1989.
15. Å. Björck. A bidiagonalization algorithm for solving ill-posed system of linear equations. *BIT*, 28:659–670, 1988.
16. Å. Björck. A direct method for sparse least squares problems with lower and upper bounds. *Numer. Math.*, 54:19–32, 1988.
17. Å. Björck. Stability analysis of the method of semi-normal equations for least squares problems. *Linear Algebra Appl.*, 88/89:31–48, 1987.
18. Å. Björck. A general updating algorithm for constrained linear least squares problems. *SIAM J. Sci. Statist. Comput.*, 5:394–402., 1984.
19. Å. Björck. A block QR algorithm for partitioning stiff differential systems. *BIT*, 23:329–345, 1983.
20. Å. Björck and I. S. Duff. A direct method for the solution of sparse linear least squares problems. *Linear Algebra Appl.*, 34:43–67, 1980.
21. Å. Björck and T. Elfving. Accelerated projection methods for computing pseudoinverse solutions of systems of linear equations. *BIT*, 19:145–163, 1979.
22. Å. Björck. Comment on the iterative refinement of least squares solutions. *J. Amer. Statist. Assoc.*, 73:161–166, 1978.

23. Å. Björck and G. H. Golub. Eigenproblems for matrices associated with periodic boundary conditions. *SIAM Review*, 19:5–16, 1977.
24. Å. Björck and T. Elfving. Algorithms for confluent Vandermonde systems. *Numer. Math.*, 21:130–137, 1973.
25. Å. Björck and G. H. Golub. Numerical methods for computing angles between linear subspaces. *Math. Comp.*, 27:579–594, 1973.
26. Å. Björck and N. Andersson. A new high order method of regula falsi type for computing a root of an equation. *BIT*, 13:1–12, 1973.
27. Å. Björck and V. Pereyra. Solution of Vandermonde system of equations. *Math. of Comp.*, 24:893–903, 1970.
28. Å. Björck and C. Bowie. An iterative algorithm for computing the best estimate of an orthogonal matrix. *SIAM J. Numer. Anal.*, 8:358–364, 1970.
29. Å. Björck. Iterative refinement of linear least squares solutions II. *BIT*, 8:8–30, 1968.
30. Å. Björck and G. H. Golub. Iterative refinement of linear least squares solution by Householder transformation. *BIT*, 7:322–337, 1967.
31. Å. Björck. Iterative refinement of linear least squares solutions I. *BIT*, 7:257–278, 1967.
32. Å. Björck. Solving linear least squares problems by Gram-Schmidt orthogonalization. *BIT*, 7:1–21, 1967.

Proceedings: Contributions and Edited Volumes

1. Å. Björck. QR factorization of the Jacobian in some structured nonlinear least squares problems. In S. Van Huffel and P. Lemmerling, editors, *Total Least Squares and Errors-in-Variables Modeling. Analysis, Algorithms and Applications*, 225–235, Kluwer Academic Publishers, Dordrecht, 2002.
2. Å. Björck. Newton and Rayleigh quotient methods for total least squares problems. In S. Van Huffel, editor, *Recent Advances in Total Least Squares Techniques and Errors-in-Variables Modeling*, pages 149–160, Philadelphia, 1997. SIAM.
3. Å. Björck. Numerical stability of methods for solving augmented systems. In S. Reich and Y. Censor, editors, *Proceedings on Optimization and Nonlinear Analysis, Joint AMS-IMU Conference, Jerusalem, May 1995*, Vol. 434 of *NATO-ASI Series C: Mathematical and Physical Sciences*. AMS, 1996.

4. Å. Björck. Generalized and sparse least squares problems. In E. Spedicato, editor, *Algorithms for Continuous Optimization. The State of the Art*, Vol. 434 of *NATO-ASI Series C: Mathematical and Physical Sciences*, pages 37–80, Berlin, 1994. Kluwer Academic Publisher.
5. Å. Björck. Pivoting and stability in the augmented system method. In D. F. Griffiths and G. A. Watson, editors, *Numerical Analysis 1991: Proceedings of the 14th Dundee Conference, June 1991*, Pitman Research Notes in Mathematics 260, pages 1–16. Longman Scientific and Technical, 1992.
6. Å. Björck. Algorithms for linear least squares problems. In E. Spedicato, editor, *Computer Algorithms for Solving Linear Algebraic Equations; The State of the Art.*, Vol. 77 of *NATO-ASI Series F: Computer and Systems Sciences*, pages 57–92, Berlin, 1991. Springer-Verlag.
7. Å. Björck. Error analysis of least squares algorithms. In G. H. Golub and P. Van Dooren, editors, *Numerical Linear Algebra, Digital Signal Processing and Parallel Algorithms*, NATO-ASI Series, pages 41–73, Berlin, 1991. Springer-Verlag.
8. Å. Björck. Least squares methods. In P. G. Ciarlet and J. L. Lions, editors, *Handbook of Numerical Analysis*, volume I: Finite Difference Methods-Solution of Equations in R^n , pages 466–647. Elsevier/North Holland, Amsterdam, 1990.
9. Å. Björck. Iterative refinement and reliable computing. In M. G. Cox and S. J. Hammarling, editors, *Reliable Numerical Computation*, pages 249–266, Oxford, 1990. Clarendon Press.
10. Å. Björck. Some methods for separating stiff components in initial value problems. In D. F. Griffiths, editor, *Proceedings of the 1983 Dundee Biennial conference on numerical analysis*. Springer-Verlag, 1983.
11. Å. Björck and L. Eldén. Methods in numerical algebra for ill-posed problems. *Proceedings of the International Symposium on Ill-Posed Problems: Theory and Practice*, Delaware, 1979.
12. Å. Björck. SSOR preconditioning methods for sparse least squares problems. In *Proceedings of the Computer Science and Statistics 12th Annual Symposium on the Interface*, pages 21–25. University of Waterloo, Canada, 1979.
13. Å. Björck. Methods for sparse least squares problems. In J. R. Bunch and D. J. Rose, editors, *Sparse Matrix Computations*, pages 177–199, New York, 1976. Academic Press.
14. Å. Björck. A uniform numerical method for linear estimation from general Gauss-Markoff models. In *Proceedings in Computational Statistics*, Wien, 1974. Physica Verlag.