

List of Publications of Heinrich Voss

Books

3. Wolfgang Mackens, Heinrich Voß
Mathematik I für Studierende der Ingenieurwissenschaften.
Heco Verlag, Alsdorf 1993, 351 S.
2. Wolfgang Mackens, Heinrich Voß
Aufgaben und Lösungen zur Mathematik I für Studierende der Ingenieurwissenschaften.
Heco Verlag, Alsdorf 1994, 440 S.
1. Heinrich Voss
Iterative Methods for Linear Systems of Equations.
Lecture Notes 27, University of Jyväskylä 1993, 237 p.

Refereed articles in journals

80. Seyyed Abbas Mohammadi, Heinrich Voss
On the distribution of real eigenvalues in linear viscoelastic oscillators.
Numer. Linear Alg. Appl. e2228 (2019), DOI: 10.1002/nla.2228
79. Seyyed Abbas Mohammadi, Farid Bozorgnia, Heinrich Voss
Optimal shape design for the p -Laplacian eigenvalue problem.
Journal of Scientific Computing 78 (2), 1231 - 1249 (2019), DOI:10.1007/s10915-018-0806-7
78. Aleksandra Kostić, Heinrich Voss
Real eigenvalues of viscoelastic oscillators involving several damping models.
Sarajevo Journal of Mathematics 14, 35 – 43 (2018), DOI:10.5644/SJM.14.1-04
77. Pedro R.S. Antunes, Seyyed Abbas Mohammadi, Heinrich Voss
A nonlinear eigenvalue optimization problem: Optimal potential functions.
Nonlinear Analysis Series B: Real World Applications 40, 307 - 327 (2018), DOI: 10.1016/j.nonrwa.2017.09.003
76. Seyyed Abbas Mohammadi, Heinrich Voss
Variational characterization of real eigenvalues in linear viscoelastic oscillators.
Mathematics and Mechanics of Solids 23(10), 1377 - 1388 (2018), SAGE Publications, DOI: 10.1177/1081286517726368
75. Marta M. Betcke, Heinrich Voss
Restarting iterative projection methods for Hermitian nonlinear eigenvalue problems with minmax property.
Numer. Math. 135 (2), 397 – 430 (2017), DOI:10.1007/s00211-016-0804-3
74. Heinrich Voss
On a non-symmetric eigenvalue problem governing interior structural–acoustic vibrations.
Aerospace 3 (2), paper 17 (2016)
73. Seyyed Abbas Mohammadi, Heinrich Voss
A minimization problem for an elliptic eigenvalue problem with nonlinear dependence on the eigenparameter.
Nonlinear Analysis, Series B: Real World Applications 31, 119 - 131 (2016)
72. Heinrich Voss, Jiacong Yin, Pu Cheng
Preconditioning subspace iteration for large eigenvalue problems with automated multi-level substructuring.
Asian J. Math. Comput. Res. 10, 136 – 150 (2015)

71. Jörg Lampe, Heinrich Voss
Large-scale dual regularized total least squares.
ETNA 42, 13 – 40 (2014)
70. Markus Stammberger, Heinrich Voss
Variational characterization of eigenvalues of a non-symmetric eigenvalue problem governing elastoacoustic vibrations.
Applications of Mathematics 59, 1 – 13 (2014)
69. Karl Meerbergen, Christian Schröder, Heinrich Voss
A Jacobi-Davidson method for two real parameter nonlinear eigenvalue problems arising from delay differential equations.
Numer. Lin. Alg. Appl. 20, 852 – 868 (2013)
68. Heinrich Voss, Jiacong Yin, Pu Chen
Enhancing eigenvector approximations of huge gyroscopic eigenproblems from AMLS with subspace iteration.
Trans. Control Mech. Syst. 2, 294 – 301 (2013)
67. Aleksandra Kostić, Heinrich Voss
On Sylvester’s law of inertia for nonlinear eigenvalue problems.
ETNA 40, 82 – 93 (2013)
66. Jiacong Yin, Heinrich Voss, Pu Chen
Improving eigenpairs of automated multilevel substructuring with subspace iteration.
Computers & Structures 119, 115 – 124 (2013)
65. Heinrich Voss, Markus Stammberger
Structural-acoustic vibration problems in the presence of strong coupling
J. Pressure Vessel Technology 135, 011303.1-011303.8 (2013)
64. Heinrich Voss, Jörg Lampe
Large-scale Tikhonov regularization of total least squares
J. Comput. Appl. Math. 234, 95 – 108 (2013)
63. Jörg Lampe, Heinrich Voss
Efficient determination of the hyperparameter in regularized total least squares problems.
Appl. Numer. Math. 62, 1229 - 1241 (2012)
62. Jörg Lampe, Lothar Reichel, Heinrich Voss
Large-scale Tikhonov regularization via reduction by orthogonal projection.
Linear Algebra Appl. 436, 2845 – 2865 (2012)
61. J. Lampe, C. Bassoy, J. Rahmer, J. Weizenecker, H. Voss, B. Gleich, J. Borgert
Fast Reconstruction in Magnetic Particle Imaging
Phys. Med. Biol. 57, 1113 – 1133 (2012)
60. Marta M. Betcke, Heinrich Voss
Analysis and efficient solution of stationary Schrödinger equation describing the electronic states of quantum dots and rings in magnetic field.
Commun. Comput. Phys. 11, 1591 – 1617 (2012)
59. Heinrich Voss, Kemal Yildiztekin, Xin Huang
Nonlinear low rank modification of a symmetric eigenvalue problem
SIAM J. Matrix Anal. Appl. 32, 515 - 535 (2011)
58. Markus Stammberger, Heinrich Voss
Automated Multi-Level Sub-structuring for fluid-solid interaction problems.
Numer. Lin. Alg. Appl. 18, 411 – 427 (2011)
57. Jörg Lampe, Marielba Rojas, Dan C. Sorensen, Heinrich Voss
Accelerating the LSTRS algorithm.
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56. Jörg Lampe, Heinrich Voss
Solving Regularized Total Least Squares Problems Based on Eigenproblems
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55. Markus Stammberger, Heinrich Voss
On an unsymmetric eigenvalue problem governing free vibrations of fluid-solid structures.
Electr. Trans. Numer. Anal. 39, 113 – 125 (2010)
54. Vasco Niendorf, Heinrich Voss
Detecting hyperbolic and definite matrix polynomials.
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53. Heinrich Voss
A minmax principle for nonlinear eigenproblems depending continuously on the eigenparameter
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52. Jörg Lampe, Heinrich Voss
A fast algorithm for solving regularized total least squares problem
Electronic Transactions on Numerical Analysis 31, 12 - 24 (2008)
51. Marta M. Betcke, Heinrich Voss
Restarting projection methods for rational eigenproblems
Math. Modelling Anal. 13, 171 - 182 (2008)
50. Kolja Elssel, Heinrich Voss
Reducing sparse nonlinear eigenproblems by Automated Multi-Level Substructuring
Advances in Engineering Software 39, 828 - 838 (2008)
49. Marta M. Betcke, Heinrich Voss
Numerical simulation of electronic properties of coupled quantum dots on wetting layers
Nanotechnology 19 (2008), 165204
48. Jörg Lampe, Heinrich Voss
Global convergence of RTLSQEP: A solver of regularized total least squares problems via quadratic eigenproblems.
Math. Modelling Anal. 13, 55 – 66 (2008)
47. Jörg Lampe, Heinrich Voss
On a Quadratic Eigenproblem Occurring in Regularized Total Least Squares
Comput. Stat. Data Anal. 52, 1090 - 1102 (2007)
46. Heinrich Voss
A Jacobi–Davidson method for nonlinear and nonsymmetric eigenproblems.
Computers & Structures 85, 1284-1292 (2007)
45. Marta M. Betcke, Heinrich Voss
Stationary Schrödinger equations governing electronic states of quantum dots in the presence of spin–orbit splitting
Applications of Mathematics 52, 267 – 284 (2007)
44. Heinrich Voss
A new justification of the Jacobi–Davidson method for large eigenvalue problems
Lin. Alg. Appl. 424, 448 – 455 (2007)
43. Kolja Elssel, Heinrich Voss
Reducing huge gyroscopic eigenproblem by Automated Multi-Level Substructuring
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Iterative projection methods for computing relevant energy states of a quantum dot
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39. Kolja Elssel, Heinrich Voss
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35. Volker Mehrmann, Heinrich Voss
Nonlinear eigenvalue problems: A challenge for modern eigenvalue methods.
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34. Aleksandra Kostić, Heinrich Voss
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J. Comp. Appl. Math. 173, 365 – 369 (2004)
- 33 Heinrich Voss
Quadratic eigenproblems of restricted rank - Remarks on a paper of Conca, Duran and Planchard
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32. Heinrich Voss
An Arnoldi method for nonlinear eigenvalue problems
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31. Timo Betcke, Heinrich Voss
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A maxmin principle for nonlinear eigenvalue problems with application to a rational spectral problem in fluid-solid vibration.
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A method of order $1 + \sqrt{3}$ for computing the smallest eigenvalue of a symmetric Toeplitz matrix.
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Bridging stresses and R-curves in ceramic/metal composites.
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Newton type methods.
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23. O. Raddatz, G.A. Schneider, W. Mackens, H. Voss, N. Claussen
Bridging stresses and R-curves in ceramic/metal composites.
J. European Ceramic Society 20, 2261 – 2273 (2000)
22. Wolfgang Mackens, Heinrich Voss
General masters in parallel condensation of eigenvalue problems.
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mitian interpolation.
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systems.
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11. Heinrich Voss
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10. Heinrich Voss, Ulrich Eckhardt
Linear convergence of generalized Weiszfeld's method.
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9. John W. Mooney, Heinrich Voss, Bodo Werner
The dependence of critical parameter bounds on the monotonicity of a Newton sequence.
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8. Jürgen Sprekels, Heinrich Voss
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Existence and bounds for positive solutions of superlinear Uryson equations.
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5. Jürgen Sprekels, Heinrich Voss
Ein Verfahren zur iterativen Einschließung des positiven Eigenvektors einer irreduziblen, nichtnegativen Matrix.
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1. Heinrich Voss
Projektionsverfahren für Randwertaufgaben mit nichtlinearen Randbedingungen.
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Book chapters

3. Heinrich Voss
Nonlinear eigenvalue problems.
Chapter 60 in Leslie Hegbon (ed.), Handbook of Linear Algebra, 2nd Edition, CRC Press, Boca Raton 2014
2. Heinrich Voss
Iterative projection methods for large-scale nonlinear eigenvalue problems.
pp. 187 - 214 in B.H.V. Topping, J.M. Adams, F.J. Pallarés, R. Bru, M.L. Romero (eds.), Computational Technology Reviews, vol. 1, Saxe-Coburg Publications, Stirlingshire, 2010

1. Thomas Hitziger, Wolfgang Mackens, Heinrich Voss
A condensation-projection method for the generalized eigenvalue problem.
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67. Heinrich Voss
Variational Principles for Eigenvalues of Nonlinear Eigenproblems
pp. 305–313 in A. Abdulle, S. Deparis, D. Kressner, F. Nobile, M. Picasso (eds.), Numerical Mathematics and Advanced Applications - ENUMATH 2013, Lecture Notes in Computational Science and Engineering 103, Springer, Berlin 2015
66. Jiacong Yin, Heinrich Voss, Pu Chen
Solving huge gyroscopic eigenproblems with AMLS and subspace iteration.
Proceedings of ASME 2012 International Mechanical Engineering Congress & Exposition, Houston, TX, 2012
65. Jiacong Yin, Heinrich Voss, Pu Chen
A Fast Subspace Iteration Procedure for Improving Automated Multi-Level Substructuring.
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64. Jiacong Yin, Heinrich Voss, Pu Chen
Combining automated multilevel substructuring and subspace iteration for huge gyroscopic eigenproblems.
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63. Heinrich Voss, Jörg Lampe
Regularization of Large Scale Total Least Squares Problems
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62. Marc Wilken, Alexander Menk, Heinrich Voss, Christian Cabos
Efficient calculation of fluid structure interaction in ship vibration.
pp. 75 – 82 in C. Guedes Soares, W. Fricke (eds.), Advances in Marine Structures, Taylor & Francis, London, 2011
61. Karl Meerbergen, Christian Schröder, Heinrich Voss
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60. Heinrich Voss, Markus Stammberger
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59. Markus Stammberger, Heinrich Voss
An unsymmetric eigenproblem governing vibrations of a plate with attached loads.
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58. Markus Stammberger, Heinrich Voss
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57. Heinrich Voss
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56. Tobias Hilgert, Heinrich Voss
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55. Jörg Lampe, Heinrich Voss
Solving regularized total least squares problems via a sequence of eigenvalue problems
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54. Vasco Niendorf, Heinrich Voss
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53. Heinrich Voss
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52. Kolja Elssel, Heinrich Voss
Intermediate reduction steps improve automated multi-level substructuring.
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51. Marta M. Betcke, Heinrich Voss
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50. Jörg Lampe, Heinrich Voss
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An error bound for frequency response analysis by AMLS
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43. Frank Blömeling, Heinrich Voss
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