# Curriculum of Dario Andrea Bini

October 2025

Born on January 2, 1950; Laurea in Mathematics, University of Pisa 1973

**Academic positions**

- 1990-2020: Full Professor of Numerical Analysis at the Department of Mathematics, University of Pisa. Retired since November 2020.
- 1986-1990: Full Professor of Numerical Analysis at the Department of Mathematics, University of Rome "Tor Vergata"
- 1982-1986: Associate Professor at the Department of Mathematics, University of Pisa.
- 1978-1982: Assistant Professor at the Department of Mathematics, University of Pisa.
- 1975-1978: Researcher at the Department of Mathematics, University of Pisa.
- 1973-1974: Compulsory military service

**Teaching**

From 1975: courses of Rational Mechanics, Numerical Analysis, Scientific Computing, Institutions of Numerical Analysis, Laboratory of Scientific Computing, Laboratory of Computational Mathematics, at Corso di Laurea in Matematica, University of Pisa and University of Rome Tor Vergata.

**Editorial work**

- Member of the Editorial Board of the journal Calcolo 1998 – present
- Associate Editor of the journal SIAM J. Matrix Analysis Appl. 2003 – 2014
- Associate Editor of Electronic Transactions on Numerical Analysis 2014 – present
- Associate Editor of the Electronic Journal of Linear Algebra 2016 – present
- Associate Editor of Applicable Algebra in Engineering, Communications and Computing 2020 – present
- Guest Editor of special issues of the journals Linear Algebra Appl., Calcolo, Stochastic Models, J. of Comput. & Appl. Math.
- Co-Editor of "The Georg Heinig Memorial Volume", Birkhauser 2010
- Co-Editor of "Large Truncated Toeplitz Matrices, Toeplitz Operators, and Related Topics", Vol. 259 of Operator Theory Advances and Applications, Birkhauser

- Co-Editor of "Exploiting Hidden Structure in Matrix Computations: Algorithms and Applications", Lectures Notes in Mathematics 2173, Springer Verlag.

**Other activities** Organization of several workshops and conferences among which:

- "Toeplitz Matrices: Structures, Algorithms and Applications", Cortona(Italy) Sept. 1996
- "Structured Matrices: Analysis, Algorithms and Applications", Cortona(Italy) Sept. 2000
- "Structured Numerical Linear Algebra Problems: Algorithms and Applications", Cortona(Italy) Sept. 2004
- "Structured Linear Algebra Problems: Analysis, Algorithms and Applications", Cortona(Italy) Sept. 2008
- "Structured Matrix Analysis with Applications", special session within the AMS-UMI Joint Meeting, Pisa, June 2002
- "Fifth International Conference on Matrix-Analytic Methods in Stochastic Models", Pisa, June 2005
- 16th Conference of the International Linear Algebra Society (ILAS), Pisa, June 2010.
- "Structured Numerical Linear and Multilinear Algebra Problems: Analysis, Algorithms, and Applications", Leuven, Sept. 2012
- "Structured Numerical Linear and Multilinear Algebra: Analysis, Algorithms and Applications", Kalamata, Sept. 2014.

**Service**

- Director of the Computer Center of the Department of Mathematics, University of Pisa.
- Vice director of the Department of Mathematics, University of Pisa.
- Delegate of the Department of Mathematics in the Computer Service Committee of the University of Pisa.
- Member of the Board of Directors of ILAS, 2008-2012.
- Member of the advisory board of ILAS 2014-2018.

**Selected plenary/invited lectures**

- Low-Rank Structures and Numerical Methods in Matrix and Tensor Computations INdAM Workshop, Cortona, September 2025
- Proper value Decomposition 75, PVD75, Selva di Fasano, Italy, July, 7-12, 2025

- The 26th ILAS conference, Kaohsiung, Taiwan, June 2025, Hans Schneider prize lecture.
- Numerical Linear Algebra, NLACIRM24, Luminy, France, September 16 - 20, 2024.
- Challenges and Advances in Numerical Analysis, July, 5–9, 2023, Cagliari.
- Computational and Applied Mathematics CAM23. Selva di Fasano, Italy, August 29 – September 1, 2023.
- Thematic Network of Linear Algebra, Matrix Analysis and Applications – ALAMA2022-ALN2gg, June 1-3, 2022, Universidad de Alcalá, Alcalá de Henares (Madrid)
- XXI Householder Symposium on Numerical Linear Algebra, Selva di Fasano, Italy, June 12-17, 2022.
- Numerical Methods and Scientific Computing NMSC21. Luminy, France, November 2021.
- Matrix Equations and Tensor Techniques IX (METTIX). 9–10 Sept 2021. Perugia, Italy.
- Recent Advances in Scientific Computation Santa Margherita di Pula, Italy, May 27-29, 2019
- MAT TRIAD, International Conference on Matrix Analysis and its Applications, Liblice, Czech Republic, September, 2019.
- The third conference on Numerical Analysis and Scientific Computation with Applications, NASCA, Kalamata 2018.
- LINSTAT 2018, Bedlewo, Poland, August 20–24, 2018.
- Tsinghua Sanya International Mathematics Forum (TSIMF), Sanya, China, March, 14–18, 2016.
- Ninth International Conference on Matrix-Analytic Methods in Stochastic Models (MAM9) Budapest, Hungary, 28-30 giugno 2016.
- The 20th ILAS Conference, July 11–15, 2016, Leuven.
- Numerical Linear Algebra and Applications (NL2A), October 24–28, 2016, Luminy.
- First Joint International Meeting RSME-SCM-SEMA-SIMAI-UMI (Bilbao, June 30 – July 4, 2014)
- The 19th ILAS conference, Seoul, August 2014.
- 6th Conference on Structured Numerical Linear and Multilinear Algebra: Analysis, Algorithms and Applications, Kalamata, September 8th- 12th 2014
- Journées Nationales de Calcul Formel 2014, French Computer Algebra Days (JNCF), November 3–7, 2014, Luminy.
- "Structured Matrices and Tensors: Analysis, Algorithms, and Applications", Taipei, Taiwan, Dec. 8–11, 2014

- Advances in Matrix Functions and Matrix Equations, Manchester April 10-12, 2013
- Advanced School and Workshop on Matrix Geometries and Applications, Trieste, July 1-12, 2013
- Nonlinear Evolution Equations and Linear Algebra Cagliari, Sardinia, Italy, September 2-5, 2013
- Structured Numerical Linear and Multilinear Algebra Problems, Leuven (Belgium), September 10–14, 2012
- Structured Matrix Computations in non-Euclidean Geometries: Algorithms and Applications. Luminy, October 8–12, 2012.
- Haifa Matrix Theory Conference, November 12–15, 2012, Haifa.
- Matrices and operators Conference, December 27–30, 2012, Bangalore, India
- FoCM 11, Foundations of Computational Mathematics, Budapest, Hungary, July 8-10, 2011.
- MOPNET: EPSRC Matrix and Operator Pencil Network, Edinburgh 2010
- The Third International Conference on Structured Matrices and Tensors, Hong-Kong 2010
- Haifa Matrix Theory Conference, May 2009, Hiafa, Israel.
- Advanced Workshop on Trends and Developments in Linear Algebra, Trieste, July 2009
- "15-th ILAS Conference", Cancun, Mexico, June 2008
- Journees de l'ANR GECKO, Sophia Antipolis, Nov. 2007
- Haifa Matrix Theory Conference, April 2007
- ICIAM-07 -minisymp. on tensor analysis, Zurich, July 2007
- ICIAM-07 -minisymp. on structured matrices, Zurich, July 2007
- 2nd International conference on matrix methods and operator equations, Moscow, July 2007
- 13-th ILAS Conference, Amsterdam 2006
- The 2nd International Conference on Structured Matrices, Hong Kong, 2006
- "Structured Numerical Linear Algebra Problems: Algorithms and Applications", Cortona, Italy, September 2004
- "11th Conference of the International Linear Algebra Society", Coimbra, Portugal, July 2004.
- "International conference on the numerical solution of Markov chains", Urbana-Champaign, Illinois, September 2003
- "Third International Conference on Matrix-Analytic Methods in Stochastic Models", Leuven (Belgio), July 2000

- "Ninth International Congress on Computational and Applied Mathematics", Leuven (Belgio), June 2000
- "Structured Matrices: Analysis, Algorithms and Applications", Cortona, September 2000,

**Summer schools**

- CIME Summer School "Exploiting Hidden Structure in Matrix Computations. Algorithms and Applications", Cetraro, June 2015
- "Journes Nationales de Calcul Formel (JNCF) 2014" Luminy, Nov. 2014
- "Advanced School and Workshop on Matrix Geometries and Applications", Trieste July 2013

**Direction of Research projects**

In the framework of MIUR, Principal Investigator of the national research projects PRIN 2002, PRIN 2004, PRIN 2006, PRIN 2008. PI of several CNR and GNCS research projects.

**Students**

E.Bozzo, S.Serra Capizzano, G.Fiorentino, B.Meini, B.Iannazzo, P.Boito, F.Poloni, V.Noferini, L.Robol, S.Massei
M.Sc. students: L.Gemignani, F.Di Benedetto
All of them are professors at universities in Italy and abroad. According to The Mathematics Genealogy Project, Dario Andrea Bini has 13 students and 54 descendants.

**Awards**

– 2025 : Hans Schneider Prize, International Linear Algebra Society
– 2019 : Ordine del Cherubino Award, University of Pisa

**Books**

- D.A.Bini, B.Iannazzo, B.Meini, Numerical Solution of Algebraic Riccati Equations, SIAM Book Series Fundamentals of Algorithms, 2012.
- D.A.Bini, G.Latouche, B.Meini, Numerical Methods for Structured Markov Chains, Oxford University Press, 2005.
- D.Bini, V.Pan, Polynomial and Matrix Computations, Vol 1: Fundamental Algorithms, Birkhauser, Boston 1994.
- D.Bini, M.Capovani, G.Lotti, F.Romani, Complessità Numerica, Boringhieri 1981.
- R.Bevilacqua, D.Bini, M.Capovani, O.Menchi, Introduzione Alla Matematica Computazionale, Zanichelli, Bologna 1987.
- D.Bini, M.Capovani, O.Menchi, Metodi Numerici per l'Algebra Lineare, Zanichelli, Bologna 1988.

- R.Bevilacqua, D.Bini, M.Capovani, O.Menchi, Metodi Numerici, Zanichelli, Bologna 1992.

**Software**

- Matlab files from the book: Numerical Solution of Algebraic Riccati Equations, SIAM 2012.
- SMCSolver, A Fortran 90 software tool, with a user friendly GUI, for solving Structured Markov Chains
- MPSolve v. 3.2.3, A package for computing polynomial zeros with arbitrarily large precision
- Pzeros, A fortran77 package for computing polynomial zeros based on the Ehrlich-Aberth iteration
- Eigensolve v.1.1, Solving the tridiagonal eigenvalue problem by means of the Ehrlich-Aberth iteration
- CQT Toolbox, Matrix arithmetic for Quasi-Toeplitz matrices

**Bibliometrics** (August 2025):
Scopus: publications 128, citations 3231, h-index 31
Google Scholar: citations 8703, h-index 49
ResearchGate: publications 253, citations 6439, h-index 41

**Research Activity**
Field of interest: design and analysis of numerical algorithms for linear algebra and for polynomial computations, computational complexity, matrix equations, matrix structures, computational methods for stochastic models.

The early papers of the 1980s concerned the complexity analysis of matrix multiplication. The concepts of "border rank" and of "approximate complexity" were introduced for the first time together with an algorithm for fast matrix multiplication leading to the exponent 2.779 of matrix multiplication complexity which improved Strassen's and Pan's algorithms. Border rank has become the key tool at the basis of the currently asymptotically fastest algorithms for computing matrix product.

Polynomial computations and their relationships with structured matrices, in particular Toeplitz matrices, is another research topic. The parallel complexity of polynomial division, the border rank of triangular Toeplitz matrices, the LU factorization of Bezout matrices and the Euclidean scheme have been part of the research subjects in this area. The joint book with V. Pan "Polynomial and Matrix Computations", Birkhauser 1998, is the synthesis of large part of the research carried out in this field.

Toeplitz matrices and their displacement structures have been the subject of part of the research with the analysis of Toeplitz preconditioners within matrix algebras like the tau class and the Hartley algebra.

Polynomial computations received a more concrete attention in terms of software design: the package MPSolve for computing zeros of polynomial with

any precision, and its new release of 2014, is the most efficient fast and reliable tool for polynomial rootfinding since 2000.

Subsequently, more interest has been addressed to computational problems, including linear systems and nonlinear matrix equations, encountered in solving certain queueing models where large (infinite) structured matrices appear. Here, an adaptation of the cyclic (CR )reduction algorithm to solve infinite block tridiagonal systems has been introduced and extended to infinite block Toeplitz-like systems in Hessenberg form. The same algorithm has been extended to the solution of matrix equations expressed by matrix polynomials and matrix Laurent series.

A novel interpretation of CR has been given in functional form in terms of the Graeffe iteration. Together with the use of canonical factorizations, this provided new convergence results for CR and the design of new methods for general matrix equations. Part of the results are synthesized in the book "Numerical methods for structured Markov chains", Oxford 2005, jointly written with G. Latouche and B. Meini.

Numerical methods for algebraic Riccati equations (AREs) is another area of interest. New doubling algorithms for AREs have been introduced in particular a method for the transport equation. The book "Numerical Solution of Algebraic Riccati Equations", SIAM 2012, joint with B. Iannazzo and B. Meini, contains the state of the art of the research on algebraic Riccati equations.

A topic of interest concerns the analysis of rank structured matrices like the semiseparable and quasiseparable classes. Algorithms for performing the QR iterations with a low complexity per step have been designed and applied to companion-like matrices. In this framework, linearizations and l-ifications of matrix polynomials hav been introduced togeter with localizations of the roots of matrix polynomials.

Part of the research concerns the interplay between symbolic and numeric tools in certain polynomial computations involving structured matrices and CAGD, where results having both theoretical and algorithmic interest have been obtained.

Another subject concerns the definition of the concept of geometric mean of positive definite matrices with the design and analysis of algorithms for its computations. New definitions of matrix geometric mean has been introduced together with an algorithm for its computation having cubic convergence. Particular attention has been addressed to the solution of a related matrix equation involving the matrix logarithm.

Another research area concerns the analysis of semi-infinite matrices having a quasi-Toeplitz structure encountered in the study of random walk in the quarter plane. A matrix arithmetic has been introduced and algorithm for the numerical solution of matrix equations have been analyzed. The computational analysis of eigenvalues and eigenvectors of matrices in this class has been performed.

More recently, some interest has been addressed to the analysis of road networks and to the study of the Kemeny constant for undirected graphs.

**List of Publications**

1. Bini: Su alcune condizioni di monotonia per matrici a blocchi, Calcolo 1977.
2. Bini, Capovani: Su alcune questioni di complessità computazionale numerica, BUMI 1978.
3. Bevilacqua, Bini, Capovani: On the tensorial bases of the band symmetric Toeplitz matrices. 1978
4. Bini, Capovani: Lower bounds of the complexity of linear algebras. IPL 1979.
5. Bini, Capovani, Lotti, Romani: $O(n^{2.7799})$ complexity for $n \times n$ approximate. IPL 1979.
6. Bini, Lotti, Romani: Approximate Solutions for the Bilinear Form Computational Problem. SICOMP 1980.
7. Bini: Relation between exact and approximate bilinear algorithms. Applications. Calcolo 17, 87-97, 1980.
8. Bini, Lotti: Stability of fast algorithms for matrix multiplication. Numer. Math. 1980.
9. Bini: Border rank of pxqx2 tensors and the optimal approximation of a pair of bilinear forms. Lectures Notes in Computer Science 1980.
10. Bini: Reply to the paper "the numerical instability of Bini's algorithm. IPL 1982
11. Bini, Capovani: Spectral and computational properties of band symmetric Toeplitz matrices. LAA 1983
12. Bini, Capovani: Fast parallel and sequential computations and spectral properties concerning band Toeplitz matrices. Calcolo 1983
13. Bini: On commutativity and approximation. TCS 1983.
14. Bini: Parallel Solution of Certain Toeplitz Linear Systems. SICOMP 1984.
15. Bini: Tensor and border rank of certain classes of matrices and the fast evaluation of determinant inverse matrix and eigenvalues. Calcolo 1985.
16. Bini, Pan: Fast parallel polynomial division via reduction to triangular Toeplitz matrix inversion and to polynomial inversion modulo a power. IPL 1985
17. Bini, Capovani: A Class of Cubic Splines Obtained Through Minimum Conditions. Math. Comp. 1986.
18. Bini: Border rank of $m \times n \times (mn - q)$ tensors. LAA 1986.
19. Bini, Pan: Polynomial division and its computational complexity. J. Complexity 1986.
20. Bini, Pan: Fast parallel algorithms for polynomial division over an arbitrary. CAMWA 1986.

21. Bini, Pan: A logarithmic Boolean time algorithm for parallel polynomial division. IPL 1987

22. Bini, Capovani: Tensor Rank and Border Rank of Band Toeplitz Matrices. SICOMP 1987.

23. Bini, Fontani: On the evaluation of the eigenvalues of the finite differences Laplacian over a hexagon. Calcolo 1987.

24. Bini, Pan: Efficient algorithms for the evaluation of the eigenvalues of (block) banded Toeplitz matrices. Math. Comp. 1988

25. Bini: Matrix structures in parallel matrix computations, Calcolo 25, 37-51, 1988.

26. Bini: Complexity of parallel polynomial computations. In Parallel Computing, Methods Algorithms, Applications 1989 Adam Hilger Ed.

27. Bini Di Benedetto: Solving the Generalized Eigenvalue Problem for Rational Toeplitz Matrices. SIMAX 1990.

28. Bini, Gemignani: On the Euclidean scheme for polynomials having interlaced real zeros. In Proceedings of 2-nd Annual ACM Symposium on Parallel Algorithms and Architecture, SPAA 1990.

29. Bini, Di Benedetto: A new preconditioner for the parallel solution of positive definite Toeplitz systems. Proceedings of 2-nd Annual ACM Symposium on Parallel Algorithms and Architectures SPAA 1990.

30. Bini, Pan: Parallel complexity of tridiagonal symmetric eigenvalue problem. In Proc. 2-nd Ann. ACM-SIAM Symp. on Discrete Algorithms 1990.

31. Bini, Pan: Parallel polynomial computations by recursive processes. Proceedings of 2-nd Annual ACM Symposium on Parallel Algorithms and Architectures SPAA 1990.

32. Bini, Gemignani, Pan: Improved parallel computations with matrices and polynomials. Lectures Notes in Computer Science, 510, 1991.

33. Bini, Pan: On the evaluation of the Eigenvalues of a banded Toeplitz block matrix. J. Complexity1991.

34. Bini, Di Benedetto: An observation on certain spectral properties of Toeplitz matrices, Calcolo28, 37-43, 1991.

35. Bini: Complexity of polynomial computations. In "Complexity of Structured Computational Problems" 1991, Giardini Ed.

36. Bini, Pan: Improved parallel polynomial division and its extensions. In Proceedings., 33rd Annual Symposium on Foundations of Computer Science FOCS 1992.

37. Bini, Pan: Practical improvement of the divide-and-conquer eigenvalue algorithms. Computing 1992.

38. Bini, Gemignani: On the Complexity of Polynomial Zeros. SICOMP 1992.

39. Bini, Favati: On a Matrix Algebra Related to the Discrete Hartley Transform. SIMAX 1993.

40. Bini, Pan: Improved Parallel Polynomial Division. SICOMP 1993.

41. Bini, Pan: Improved parallel computations with Toeplitz-like and Hankel-like. LAA 1993

42. Bini, Bozzo: Fast Discrete-Transforms by means of eigenpolynomials. CAMWA 1993

43. Bini, Meini: Solving certain queueing problems modelled by Toeplitz matrices. Calcolo 1993

44. Bini, Gemignani: Iteration schemes for the divide-and-conquer eigenvalue solver. Numer. Math. 1994.

45. Bini, Gemignani: Fast Parallel Computation of the Polynomial Remainder Sequence via Bezout and Hankel Matrices. SICOMP 1995.

46. Bini, Fiorentino: A multiprecision implementation of a poly-algorithm for univariate polynomial zeros, Proc. of The POSSO Workshop on Software, Paris, 1995, J.C. Faugere, J. Marchand, R. Rioboo editors.

47. Bini, Fiorentino: Adaptive Multiprecision Algorithm for Univariate Polynomial Zeros, Proc. of the First International MATHEMATICA Symposium, Computational Mechanics Publications, Southampton 1995, pp. 53–60.

48. Bini, Meini: On cyclic reduction applied to a class of Toeplitz-like matrices arising in queueing problems, Raleigh 1995. Computations with Markov Chains, Kluwer 1995

49. Bini: Divide and conquer techniques for the polynomial root-finding problem. Proc. World Congress of Nonlinear Analists 1996, De Gruyter

50. Bini, Gemignani: Erratum- Fast Parallel Computation of the Polynomial Remainder Sequence via Bezout and Hankel Matrices. SICOMP 1996.

51. Bini: Numerical computation of polynomial zeros by means of Aberth's method. Numer. Algorithms 1996.

52. Bini, Pan: Graeffe's, Chebyshev-like, and Cardinal's Processes for Splitting a Polynomial into Factors. J Complexity 1996.

53. Bini, Meini: On the Solution of a Nonlinear Matrix Equation Arising in Queueing Problems. SIMAX 1996.

54. Bini, Meini: Exploiting the Toeplitz structure in certain queueing problems. Calcolo 1996.

55. Bini, Di Benedetto: Toeplitz matrices: structures, algorithms and applications. Calcolo 1996

56. Bini, Meini: Improved cyclic reduction for solving queueing problems. Numer. Algorithms 1997.

57. Bini, Burchielli: MPSolve: 1.0: A Fortran 90 package for the numerical computation of polynomial roots, Dipartimento di Matematica Universita' di Pisa, 1997.

58. Bini, Meini: Inverting block Toeplitz matrices in block Hessenberg form by means of displacement operators: application to queueing problems. LAA 1998.

59. Bini, Meini: Using displacement structure for solving Non-Skip-Free M/G/1 type Markov chains. In Advances in Matrix Analytic Methods for Stochastic Models, Notable publications 1998

60. Bini, Gemignani: Fast fraction-free triangularization of Bezoutians with app. LAA 1998.

61. Bini, Pan. Computing Matrix Eigenvalues and Polynomial Zeros Where the Output is Real. SICOMP 1998.

62. Bini, Fiorentino: MPSolve: Numerical computation of polynomial roots v. 2.0, FRISCO report 1998

63. Bini, Meini: Effective Methods for Solving Banded Toeplitz Systems. SIMAX 1999.

64. Bini, Meini: Fast algorithms for structured problems with applications to Markov chains and queueing models. In Fast Reliable Methods for Matrices with Structure, SIAM 1999

65. Bini, Fiorentino: On the parallel evaluation of a sparse polynomial at a point. Numer. Algorithms 1999.

66. Bini, Meini: Solving block banded Toeplitz systems with banded Toeplitz blocks. SPIE Proceedings, Colorado 1999.

67. Bini, Chakravarthy, Meini: A New Algorithm for the Design of Capacity Service Units In Proceedings of the Third international Conference on the Numerical Solution of Markov Chains 1999.

68. Bini, Fiorentino: Design, analysis, and implementation of a multiprecision polynomial rootfinder. Numer. Algorithms 2000.

69. Bini: Using FFT-based techniques in polynomial and matrix computations-recent advances and applications. Numer. Funct. Anal. Optim. 2000.

70. Bini, Chakravarthy, Meini: Control of the BMAP/PH/1/K queue with group services, in Advances in Algorithmic Methods for Stochastic Models 2000.

71. Bini, Meini, Ramaswami: Analyzing M/G/1 paradigms through QBDs: the role of the block structure in computing the matrix G. In Advances in Algorithmic Methods for Stochastic Models 2000

72. Bini, Meini: Solving block banded block Toeplitz systems with structured blocks: new algorithms and open problems. In Advanced Signal Processing Algorithms, Architectures, and Implementations IX 2000.

73. Bini, Meini, Solving block banded block Toeplitz systems with structured blocks: algorithms and applications. in Structured Matrices: Recent Developments in Theory and Computation Nova Science 2000.

74. Bini, Farusi, Fiorentino, Meini: On the regularized solution of block banded block Toeplitz systems. In Proceedings of SPIE - The International Society for Optical Engineering 2000

75. Bini, Del Corso, Manzini, Margara: Inversion of Circulant matrices over $Z_m$. Math Comp 2001

76. Bini, Gemignani, Meini: Factorization of analytic functions by means of Koenig's theorem and Toeplitz computations. Numer. Math. 2001.

77. Bini, Meini: Approximate displacement rank, and applications. Contemp Math v.281, 2001

78. Bini, Gemignani, Meini: Computations with infinite Toeplitz matrices and polynomials. LAA 2002.

79. Bini, Latouche, Meini: Solving matrix polynomial equations arising in queueing problems. LAA 2002.

80. Bini, Latouche, Meini: Solving nonlinear matrix equations arising in tree-like stochastic processes. LAA 2003.

81. Bini, Boettcher: Polynomial factorization through Toeplitz matrix computations. LAA 2003.

82. Bini, Fiorentino, Gemignani, Meini: Effective Fast Algorithms for Polynomial Spectral Factorization. Numer. Algorithms 2003.

83. Bini, Codevico, Van Barel: Solving Toeplitz Least Squares Problems by Means of Newton's Iteration. Numer. Algo. 2003.

84. Bini, Gemignani, Meini: Solving certain matrix equations by means of Toeplitz computations: algorithms and applications. Contemporary Mathematics v,323, 2003

85. Bini, Latouche, Meini: Solving nonlinear matrix equations arising in tree-like stochastic processes. LAA 2003.

86. Bini, Latouche, Meini: Preface [FIFTH INTERNATIONAL CONFERENCE ON MATRIX-ANALYTIC METHODS]. Stoch. Models 2004.

87. Bini, Daddi, Gemignani: On the shifted QR iteration applied to companion matrices. ETNA 2004.

88. Bini, Gemignani: Bernstein-Bezoutian matrices. TCS 2004

89. Bini, Gemignani, Pan: Improved initialization of the accelerated and robust QR-like polynomial root-finding. ETNA 2004

90. Bini, Meini: Non-skip-free MG1-type Markov chains and Laurent matrix power series. LAA 2004.

91. Bini, Gemignani, Pan: Inverse power and Durand-Kerner iterations for univariate polynomial root-finding. CAMWA 2004.

92. Bini, Favati, Menchi: A Family of Modified Regularizing Circulant Preconditioners for Two-levels Toeplitz Systems. CAMWA 2004
93. Bini, Gemignani, Pan: Fast and stable QR eigenvalue algorithms for generalized companion matrices. Numer. Math. 2005.
94. Bini, Higham, Meini: Algorithms for the matrix pth root. Numer. Algorithms 2005.
95. Bini, Gemignani: Solving quadratic matrix equations and factoring polynomials-new fixed point iterations based on Schur complements of Toeplitz matrices. NLAA 2005.
96. Bini, Meini, Spitkovsky: Shift Techniques and Canonical Factorizations in the Solution of MG1-Type Markov Chains. Stoch. Models, 2005.
97. Bini, Gemignani, Winkler: Structured matrix methods for CAGD- an application to computing the resultant of polynomials in the Bernstein basis. LAA 2005.
98. Bini, Gemignani, Tisseur: The Ehrlich–Aberth Method for the nonsymmetric tridiagonal eigenvalue problem. SIMAX 2005.
99. Bini: Numerical solution of large Markov chains. Rendiconti Semin. matem. Torino 2006
100. Bini, Marco: Computing curve intersection by means of simultaneous iterations. Numer. Algorithms 2006.
101. Bini, Iannazzo, Latouche, Meini: On the solution of algebraic Riccati equations arising in fluid queues, Linear Algebra Appl. vol. 413, pp. 474-494, 2006.. LAA 2006.
102. Bini, Meini, Steffe, Van Houdt: Structured Markov chains solver: software tools, SMCTools, ACM, Pisa 2006.
103. Bini, Meini, Steffe, Van Houdt: Structured Markov chains solver: algorithms, SMCTools, ACM, Pisa 2006.
104. Bini, Eidelman, Gemignani, Gohberg: Fast QR Eigenvalue Algorithms for Hessenberg Matrices which are Rank-One perturbations of Unitary Matrices. SIMAX 2007.
105. Bini: Fast Matrix Multiplication in Handbook of Linear Algebra. Chapman & Hall/CRC 2007
106. Bini, Boito: Structured matrix-based methods for polynomial eps-gcd. ISSAC 2007
107. Bini, Eidelman, Gemignani, Gohberg: The unitary completion and QR iterations for a class of structured matrices. Math. Comp. 2008
108. Bini, Pan, Verschelde: Preface. TCS 2008.
109. Bini, Del Corso, Romani: Evaluating Scientific Products by means of Citation-Based Models: a first Analysis and Validation. ETNA 2008

110. Bini, Meini, Ramaswami: A probabilistic interpretation of cyclic reduction and its relationships with logarithmic reduction. Calcolo2008.
111. Bini, Iannazzo, Poloni: A Fast Newton‘s Method for a Nonsymmetric Algebraic Riccati equation. SIMAX 2008.
112. Bini, De Rossi, Gabutti: On certain (block) Toeplitz matrices related to radial functions. LAA 2008.
113. Bini, Meini, Poloni: Fast solution of a certain Riccati equation through Cauchy-like matrices. ETNA 2008.
114. Bini, Meini: The cyclic reduction algorithm- from Poisson equation to stochastic processes and beyond. Numer. Algorithms 2008.
115. Bini, Meini, Ramaswami: A note on computing the tail decay of M/G/1-type Markov renewal processes. Stoch. Models 2009.
116. Bini, Meini, Steffe, Van Houdt: SMCSolver and Q-MAM: tools for matrix-analytic methods. Proceedings CD of the Fourth International ICST Conference on Performance Evaluation Methods and Tools 2009.
117. Bini, Iannazzo, Meini, Poloni: Nonsymmetric algebraic Riccati equations associated with an M-matrix: recent advances and algorithms. Matrix Methods: Theory, Algorithms and Applications, World Scientific 2010.
118. Bini, Del Corso, Romani: A combined approach for evaluating papers, authors and scientific journals. JCAM 2010
119. Berry, Bini, Mastronardi, Serra Capizzano: Preface. JCAM 2010
120. Bini, De Lathauwer, Mastronardi, Serra: Preface. JCAM 2010
121. Bini, Boito, Eidelmann, Gemignani, Gohberg: A fast implicit QR eigenvalue algorithm for. LAA 2010.
122. Bini, Meini, Poloni: An effective matrix geometric mean satisfying the Ando-Li-Mathias properties. Math. Comp. 2010
123. Bini, Boito: A fast algorithm for approximate polynomial GCD based on structured matrix computations. In Numerical methods for structured matrices and applications, Birkhauser 2010
124. Bini, Del Corso, Romani: A combined approach for evaluating papers, authors and scientific journals. JCAM 2010
125. Bini, Mehrmann, Olshevsky, Tyrtyshnikov, Van Barel: Numerical Methods for Structured Matrices and Applications. Birkhauser 2010.
126. Bini, Meini, Poloni: Transforming algebraic Riccati equations into unilateral quadratic matrix equations. Numer. Math. 2010
127. Bini, Meini, Poloni: On the solution of a quadratic vector equation arising in Markovian Binary Trees. NLAA 2011.
128. Bini, Iannazzo: A note on computing matrix geometric means, Adv. Comp. Math 2011

129. Bini, Meini, Poloni: On the solution of a quadratic vector equation arising in Markov chains. NLAA 2011.
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