

LEIBA RODMAN

Curriculum Vitae

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PERSONAL DATA: Born June 9, 1949 in Riga, Latvia. U. S. citizen.
Married with four children.
Home address:
4952 Burnley Drive, Williamsburg, VA 23188, USA.

PROFESSIONAL EDUCATION

- 1966 - 1971 Diploma (approximately equivalent to M. S. degree)
in Mathematics
Latvian State University, Riga, Latvia.
Thesis: "On the augmentation ideal in group algebras".
- 1974 - 1976 M. A. degree (with distinction)
in Statistics - Operations Research
Tel-Aviv University, Tel-Aviv, Israel.
Thesis: "On the many-armed bandit problem".
- 1974 - 1978 Ph. D. degree (with distinction) in Mathematics
Tel-Aviv University, Tel-Aviv, Israel.
Thesis: "Spectral theory of analytic matrix functions".
Ph. D. adviser: Prof. I. Gohberg.

ACADEMIC EMPLOYMENT

- 1988 - present Professor, Department of Mathematics,
College of William and Mary, Williamsburg, Virginia.
- 1987 - 1988 Visiting Professor, Department of Mathematics,
College of William and Mary, Williamsburg, Virginia.
- 1987 - 1989 Professor, Department of Mathematics,
Arizona State University, Tempe, Arizona.
- Fall 1986 Visiting Associate Professor, Department of Mathematics,
University of California, San Diego.
- Aug. 1984 - 1987 Associate Professor, Department of Mathematics,
Arizona State University, Tempe, Arizona.
- Oct. 1983 - 1987 Associate Professor, Department of Mathematics,
Tel-Aviv University, Tel-Aviv, Israel.
- Apr. 1981 -
Sept. 1983 Senior Lecturer, Department of Mathematics,
Tel-Aviv University, Tel-Aviv, Israel.
- Aug. 1980 -
Feb. 1981 Visiting Scientist, Department of Mathematics,
Vrije Universiteit, Amsterdam, The Netherlands.
- 1979 - 1980 Part-time Instructor,
Department of Mathematics and Statistics,
University of Calgary, Calgary, Alberta, Canada.
- 1978 - 1980 Post-doctoral Fellow,
Department of Mathematics and Statistics,
University of Calgary, Calgary, Alberta, Canada.
- 1973 - 1978 Instructor (last position),
Departments of Mathematics and of Statistics,
Tel-Aviv University, Tel-Aviv, Israel.

RESEARCH INTERESTS

Operator theory, matrix analysis, matrix and operator valued functions, general preserver problems, systems and control, stability, differential equations, optimization and interpolation, combinatorial matrix theory, almost periodic functions, abstract harmonic analysis, geometry of matrices.

MAJOR EXTERNAL RESEARCH GRANTS

1983 - 1985	Fund for Basic Research, Israel Academy of Sciences and Humanities.
1985 - 2004, 2005 - 2009	National Science Foundation Grants.
1989 - 1993, 1995 - 1998	Binational Israel - U. S. A. Foundation Grants.
Summers of 1990, 1991, 1992, 1994, 1996	Research Experiences for Undergraduates, NSF.
1991 - 1994	U. S. A. - The Netherlands International Cooperation Grant.
1996 - 1998	NATO Collaborative Research Grant.
2006 - 2007	Collaboration grant with Universities of Ljubljana and Maribor, Slovenia.
2008 - 2009	USA - Slovenia grant (joint with C.-K. Li)

TEACHING

Undergraduate and graduate courses in linear algebra, differential equations, functional analysis, abstract algebra, real analysis, operator theory, complex analysis, multivariable calculus, senior seminar.

Developed and taught an upper level undergraduate course in Applied Linear Algebra.

Participated in the ATLAST Workshop (July 1995) on teaching of linear algebra through the use of software tools.

UNDERGRADUATE RESEARCH SUPERVISION

Honors Theses

J. E. Rubin, Deterministic communicable disease models, Honors Thesis, 1991.

6 Honors Theses committees.

Research Experiences for Undergraduates

(Unless otherwise indicated, at the Department of Mathematics, College of William and Mary)

J. E. Rubin, Direct complements of invariant Lagrangian subspaces, REU, 1990.

A. Bartelt, Minimal rank of tri-diagonal partial matrices, REU, 1991 (advised jointly with C. R. Johnson and H. J. Woerdeman).

P. P. Mehta, Linear operators preserving the inner and outer c -spectral radii, REU, 1992 (advised jointly with C. K. Li).

D. S. Keeler, On the numerical range of 3×3 matrices, REU, 1994 (advised jointly with I. M. Spitkovsky).

A. L. Cohen, Convergence of matrix sets, REU, 1994 (advised jointly with D. P. Stanford).

D. Quint, Almost periodic factorization of 2×2 triangular matrix functions: applications of a structure preserving transformation, REU, 1996 (advised jointly with I. M. Spitkovsky).

J. Lin, Determinants of zero - one matrices with constant row and column sums, REU, 1996 (advised jointly with C. K. Li).

B. Lins, P. Meade, Normal matrices and polar decompositions in indefinite inner products, 1999 - 2000 academic year.

P. Meade, Shell of operators in Krein spaces, Spring and Fall 2001.

E. J. Yarkoni (Ben Gurion University of the Negev, Israel; advised jointly with I. Lewkowicz), Convex invertible sets, 2003 - 2004 academic year.

H. Seyalioglu, Common invariant cones, Spring 2005, Fall 2006 (advised jointly with I. M. Spitkovsky).

A. Rastogi, Almost periodic factorization of 2×2 triangular matrix functions: new cases, Fall 2007, Spring 2008 (advised jointly with I. M. Spitkovsky).

S. Clark, Preservers of nonnegative matrices, Fall 2007, Spring 2008 (advised jointly with C.-K. Li).

Publications with undergraduates

Items [132], [140], [144], [162], [174], [183], [185], [202], [206], [217], [241], [314] in the list of publications below. All but [314] refereed.

POST DOC MENTORSHIP

C. Mehl (Technische Universität Berlin, Germany), 1999 - 2000 academic year.

M. C. B. Reurings (Vrije Universiteit, Amsterdam), 2003 - 2004 academic year.

D. Volok (Weizmann Institute of Science, Israel), 2006 - 2007 academic year.

DEPARTMENTAL SERVICE

Major committees (from 2002 on):

Personnel Committee: 2002 - 2003 academic year, 2006 - 2007 academic year.

Merit Evaluation Committee: 2003 - 2004 academic year, 2005 - 2006 academic year.

ACTIVITIES IN PERIODICALS, PROFESSIONAL ORGANIZATIONS

Associate Editor, Linear Algebra and its Applications (1988 - 1999).

Advisory Editor, Linear Algebra and its Applications (2000 - 2002).

Senior Editor, Linear Algebra and its Applications (2003 - 2007).

Associate Editor, Integral Equations and Operator Theory (since 2003).

Associate Editor, Complex Analysis and Operator Theory (since 2006).

Editor-in-Chief, Operators and Matrices (since 2006).

Steering Committee, International Workshops in Operator Theory (since 1987).
Advisory Committee (chair), International Linear Algebra Society (2002 - 2005).
Member of American Mathematical Society (since 1980), Society of Industrial and Applied Mathematics (since 1986), International Linear Algebra Society (since 1990).

REFEREE AND REVIEW

Reviewer for Zentralblatt MATH (until 2007) and Mathematical Reviews (from 1979).
Refereed papers for many journals in operator theory, linear algebra, differential and integral equations, networks, systems and control, and general mathematical journals.
Reviewed grant proposals for NSF (Modern Analysis, Algebra and Number Theory, Applied Mathematics), National Security Agency, International Science Foundation, Israel Science Foundation, National Science Council, United States - Israel Binational Science Foundation.

ORGANIZATION OF PROFESSIONAL MEETINGS AND CONFERENCES

Organizing committee:

Conference on Operator Theory and Functional Analysis, Mesa, Arizona, 1987.
8th Workshop on Numerical Ranges and Radii, Bremen, Germany, 2006.
International Workshop on Operator Theory and its Applications, College of William and Mary, 2008.

18 invited and special sessions at various conferences.

PRESENTATIONS AT PROFESSIONAL MEETINGS AND CONFERENCES

1977 Annual Meeting of Israel Mathematical Union, Jerusalem, Israel.
1979 AMS-NSA-NATO Summer Seminar an Algebraic and Geometric Methods in Linear Systems Theory, Harvard, Massachusetts.
1979 770th Meeting of the American Mathematical Society, Kent, Ohio.
1979 4th International Symposium on Mathematical Theory of Networks and Systems, Delft, The Netherlands.
1980 8th Canadian Operator Symposium, Victoria, Canada.
1981 Toeplitz Centennial Conference, Tel-Aviv, Israel.
1981 Functional Analysis Conference, Santa Monica, California.
1982 Annual Meeting of Israel Mathematical Union, Ramat-Gan, Israel.
1982 International Workshop on Current problems in Matrix Theory, Calgary, Canada.
1983 Operator Theory Days, Tel-Aviv University, Tel-Aviv, Israel.
1983 Workshop on Applications of Linear Operator Theory to Systems and Networks, Rehovot, Israel.
1983 6th International Symposium on Mathematical Theory of Networks and Systems, Beer-Sheva, Israel.

- 1984 NATO/LMS Advanced Study Institute in Operators and Function Theory, Lancaster, England.
- 1984 Matrix Theory Conference, Technion, Haifa, Israel.
- 1985 Operator and Approximation Theory Days, Tel-Aviv University, Israel.
- 1985 Workshop on Operator Theory and its Applications, Vrije University, Amsterdam, the Netherlands (invited participation).
- 1985 NSF-CBMS Regional Conference on Optimization in Operator Theory, Analytic Function Theory and Electrical Engineering, Lincoln, Nebraska.
- 1985 SIAM Fall Meeting, Arizona State University, Tempe, Arizona.
- 1985 Function Theoretic Operator Theory, Bloomington, Indiana.
- 1985 2-nd Midwest Workshop on Control Theory, Tempe, Arizona.
- 1986 Auburn Matrix Theory Conference, Auburn University, Alabama (invited participation).
- 1986 Asymmetric Algebras and Invariant Subspaces, Bloomington, Indiana.
- 1986 Great Plains Operator Theory Seminar, Cincinnati, Ohio (invited participation).
- 1986 Wiener-Hopf Problems with Applications, Oberwolfach, Germany (invited participation).
- 1986 SIAM Conference on Linear Algebra in Signals, Systems, and Control, Boston, Massachusetts.
- 1986 Southern California Matrix Theory Meeting, San Diego, California (invited participation).
- 1987 2nd Utah State University Matrix Theory Conference, Logan, Utah.
- 1987 Combinatorial Matrix Analysis Conference, Victoria, Canada.
- 1987 Great Plains Operator Theory Seminar, Lawrence, Kansas (invited participation).
- 1987 Operator Theory and Functional Analysis, Mesa, Arizona (co-organizer).
- 1987 Mathematical Theory of Networks and Systems, Phoenix, Arizona (invited participation, organizer of two sessions).
- 1987 SIAM Workshop on Mathematics in Systems and Signal Processing, Stanford University, California.
- 1987 35th Anniversary Meeting of SIAM, Denver, Colorado.
- 1987 Gatlinburg X Meeting on Numerical Linear Algebra, Fairfield Glade, Tennessee (invited participation).
- 1987 26th IEEE Conference on Decision and Control, Los Angeles, California.
- 1988 4th South East Analysis Meeting, Charlottesville, Virginia.
- 1988 SIAM Conference on Applied Linear Algebra, Madison, Wisconsin.
- 1988 Workshop on Linear Analysis and Operators, Groningen, The Netherlands (invited participation).
- 1988 Summer Research Institute on Operator Theory and Operator Algebras, University of New Hampshire, Durham, New Hampshire.
- 1988 Thompson Lectures/Conference, Johns Hopkins University, Baltimore, Maryland.
- 1988 International Conference on Operator Theory: Advances and Applications, Calgary, Alberta, Canada.
- 1988 27th IEEE Conference on Decision and Control, Austin, Texas.
- 1989 March, South East Analysis Meeting V, Athens, Georgia.
- 1989 April, Conference on Linear Algebra, Applied Linear Algebra and

- Applications, Northern Illinois University, De Kalb, Illinois (invited participation).
- 1989 May, Great Plains Operator Theory Seminar, Houston, Texas (invited participation).
- 1989 May, NATO-NSF Research Institute on Orthogonal Polynomials, Ohio State University, Columbus, Ohio (invited participation).
- 1989 June, International Symposium on Mathematical Theory of Networks and Systems, Amsterdam, The Netherlands (invited participation, session organizer).
- 1989 June, Workshop on Matrix and Operator Theory, Rotterdam, The Netherlands (invited participation).
- 1989 June, Conference on the Riccati Equations in Control, Systems, and Signals, Como, Italy (invited participation).
- 1989 Summer Research School in Operator Theory, Amsterdam, The Netherlands (invited participation).
- 1989 August, Meeting of the International Linear Algebra Society, Provo, Utah (invited participation).
- 1990 January, AMS Annual Meeting, Louisville, Kentucky (invited participation).
- 1990 March, Conference on Directions in Matrix Theory, Auburn, Alabama.
- 1990 April, Great Plains Operator Theory Seminar, Albuquerque, New Mexico (invited participation).
- 1990 April, 3rd Midatlantic Algebra Conference, Blacksburg, Virginia.
- 1990 May, IEEE International Symposium on Circuits and Systems, New Orleans, Louisiana.
- 1990 May, American Control Conference, San Diego, California.
- 1990 July, SIAM Annual Meeting, Chicago, Illinois.
- 1990 November, 2nd SIAM Conference on Linear Algebra in Signals, Systems, and Control, San Francisco, California (session organizer).
- 1990 November, Linear Algebra Conference, Santa Barbara, California.
- 1990 December, 29th IEEE Conference on Decision and Control, Honolulu, Hawaii.
- 1991 April, South East Analysis Meeting, Charlotte, North Carolina.
- 1991 June, 7th Haifa Matrix Theory Conference, Haifa, Israel.
- 1991 July, International Conference on Industrial and Applied Mathematics, Washington, DC.
- 1991 July, International Symposium on Mathematical Theory of Networks and Systems, Kobe, Japan (session organizer).
- 1991 September, 4th SIAM Conference on Applied Linear Algebra, Minneapolis, Minnesota (session organizer).
- 1991 October, Symposium on Operator and Matrix Theory, Calgary, Canada.
- 1992 March, Workshop on Analytic Methods in Operator Theory and Singular Integral Equations, Bar Ilan University, Israel (invited participation).
- 1992 May, Canadian Operator Symposium, Calgary, Canada (invited participation).
- 1992 June, IMA Workshop on Linear algebra for Control Theory, Minneapolis, Minnesota (session organizer).
- 1992 August, 2nd Meeting of International Linear Algebra Society, Lisbon, Portugal (invited participation).
- 1992 August, Workshop on Numerical Ranges and Numerical Radii, Williamsburg, Virginia (invited participation).

- 1992 September, SIAM Conference on Control and its Applications, Minneapolis, Minnesota.
- 1992 September, IMA Workshop on Robust Control, Minneapolis, Minnesota.
- 1992 September, Conference on Toeplitz and Wiener-Hopf Operators, Santa Cruz, California (invited participation).
- 1992 October, AMS Meeting, Dayton, Ohio (invited participation).
- 1993 March, 3rd Conference of International Linear Algebra Society, Pensacola, Florida (organization committee).
- 1993 April, AMS Meeting, Howard University, Washington, DC. (invited participation).
- 1993 June, Workshop on Nonnegative Matrices, Applications and Generalizations, Technion, Haifa, Israel.
- 1993 8th Haifa Matrix Theory Conference, Technion, Haifa, Israel (invited participation).
- 1993 July, Workshop on Operator Theory and Eigenvalue Problems, Vienna Technical University, Austria (invited participation).
- 1993 August, International Symposium on Mathematical Theory of Networks and Systems, University of Regensburg, Germany (session organizer).
- 1993 August, 3rd SIAM Conference on Linear Algebra in Signals, Systems, and Control, Seattle, Washington (session organizer).
- 1994 January, AMS Annual Meeting, Cincinnati, Ohio (invited participation).
- 1994 April, 3rd Old Dominion Analysis Conference (invited participation).
- 1994 June, 5th SIAM Conference on Applied Linear Algebra, Snowbird, Utah (invited participation, moderator).
- 1994 July - August, Summer School on Analysis and Operator Theory, Vrije Universiteit, Amsterdam, The Netherlands (invited participation).
- 1994 August, Numerical Ranges Conference, Coimbra, Portugal (invited participation).
- 1994 August, 4th Conference of International Linear Algebra Society, Rotterdam, The Netherlands (invited participation).
- 1994 October, Conference on Applications of Operator Theory, Winnipeg, Canada (invited participation).
- 1994 November, 896th Meeting of AMS, Richmond, Virginia (invited participation).
- 1995 March, South East Analysis Meeting XI, Atlanta, Georgia (invited participation).
- 1995 April, Conference on Mathematical Analysis and Automatic Control, Tuscaloosa, Alabama (invited participation).
- 1995 April, 3rd SIAM Conference on Control, St. Louis, Missouri (invited participation).
- 1995 May, Joint AMS - Israel Mathematical Union Meeting, Jerusalem, Israel (invited participation).
- 1995 May, 9th Haifa Matrix Theory Conference, Haifa, Israel (invited participation).
- 1995 August, International Workshop on Operator Theory and its Applications, Regensburg, Germany (invited participation).
- 1995 Old Dominion Operator Theory and Analysis Conference (co-organizer).
- 1996 March, South East Analysis Meeting XII, University of Richmond, Virginia.
- 1996 March, Mid-Atlantic Algebra Conference, North Carolina State University, Raleigh, North Carolina (invited participation).

- 1996 May, Workshop in Matrix Theory, Bled, Slovenia (invited participation).
- 1996 June, Summer Meeting of Canadian Mathematical Society, Calgary, Canada (invited participation).
- 1996 June, 3rd Western Canada Linear Algebra Meeting, Kananaskis Village, Alberta, Canada.
- 1996 June, International Workshop on Operator Theory, Bloomington, Indiana (invited participation).
- 1996 June, International Symposium on Mathematical Theory of Networks and Systems, St. Louis, Missouri (invited participation, session organizer).
- 1996 August, 6th Conference of International Linear Algebra Society, Chemnitz, Germany (invited participation).
- 1996 October, Meeting of AMS, Chattanooga, Tennessee (invited participation).
- 1997 March, South East Analysis Meeting, Gainesville, Florida.
- 1997 April, Mid-Atlantic Algebra Conference, Blacksburg, Virginia.
- 1997 July, European Control Conference, Brussels, Belgium.
- 1997 July, Operator Theory Symposium, Vrije Universiteit, Amsterdam (invited participation).
- 1997 September, Wabash Analysis Conference, Indianapolis, Indiana.
- 1997 October, Sixth SIAM Conference on Applied Linear Algebra, Snowbird, Utah, (invited participation, session organizer).
- 1997 November, Workshop on Operator Theory and Functional Analysis, Amsterdam, The Netherlands (invited participation).
- 1997 December, 36th IEEE Conference on Decision and Control, San-Diego (session organizer).
- 1998 January, 10-th Haifa Matrix Conference, Haifa, Israel.
- 1998 May, Third Conference on Function Spaces, SIUE, Edwardsville, Illinois.
- 1998 June, Fourth Workshop on Numerical Ranges and Numerical Radii, Madison, Wisconsin.
- 1998 June, Seventh Conference of the International Linear Algebra Society, Madison, Wisconsin (invited participation).
- 1998 June-July, International Workshop on Operator Theory and its Applications, Groningen, The Netherlands (invited participation).
- 1998 July, International Symposium on Mathematical Theory of Networks and Systems, Padova, Italy (invited participation).
- 1999 January, Annual AMS Meeting, San Antonio, Texas.
- 1999 March, Workshop on Operator Theory, Weizmann Institute of Science, Rehovot, Israel (invited participation).
- 1999 March, Meeting of Amer. Math. Soc., Gainesville, Florida (session organizer).
- 1999 June, 2nd Linear Algebra Workshop, Bled, Slovenia (invited participation).
- 1999 June, Structured Matrices in Operator Theory, Numerical Analysis, Control, Signal and Image Processing, AMS-IMS-SIAM Summer Research Conferences, Boulder, Colorado (invited participation).

- 1999 September, International Workshop on Analysis of Vibrating Systems, Canmore, Canada (invited participation).
- 2000 January, Amer. Math. Soc. Joint Annual Meeting, Washington, DC.
- 2000 March, Southeastern Analysis Meeting, Charlottesville, Virginia.
- 2000 March, Miniconference on Operator Theory and Operator Algebras, East Carolina University (invited participation).
- 2000 June, International Workshop on Operator Theory and its Applications, Bordeaux, France (invited participation).
- 2000 June, International Symposium on Mathematical Theory of Networks and Systems, Perpignan, France (invited participation).
- 2000 September, International Workshop on Operator Theory and its Applications, Faro, Portugal (invited participation).
- 2000 October, 7-th SIAM conference on Applied Linear Algebra, Raleigh, North Carolina.
- 2001 March, Mid-Atlantic Algebra conference, Virginia Tech, Blacksburg, Virginia.
- 2001 June, Conference on Complex Analysis and Dynamical Systems, Karmiel, Israel (invited participation).
- 2001 June, Meeting of the International Linear Algebra Society, Haifa, Israel (invited participation).
- 2001 July, Fifth SIAM Conference on Control and its Applications, San Diego, California (invited participation).
- 2001 July, Workshop on Operator Theory, San Diego, California (invited participation).
- 2001 August, SIAM Conference on Linear Algebra in Signals, Systems, and Control, Boston, Mass. (invited session organizer).
- 2001 October, Virginia Operator Theory and Complex Analysis Meeting, Richmond, Virginia (invited participation).
- 2002 March, AMS Regional Meeting, Georgia Tech, Atlanta (invited participation).
- 2002 March, Workshop on Multilinear Algebra, Lisbon.
- 2002 May, Workshop on Linear Algebra, Bled, Slovenia (invited participation).
- 2002 June, Conference of International Linear Algebra Society, Auburn, Alabama (invited session co-organizer).
- 2002 August, International Workshop on Operator Theory and Applications, Virginia Tech, Blacksburg, Virginia (co-organizer).
- 2002 August, International Symposium on Mathematical Theory of Networks and Systems, University of Notre Dame, Indiana.
- 2003 June, International Workshop on Operator Theory and Applications, Cagliari, Italy (invited participation).
- 2003 June, Conference on Operator Theory, System Theory, and Scattering Theory: Multidimensional Generalizations, Ben Gurion University of the Negev, Beer Sheva, Israel (invited participation).
- 2003 July, SIAM Conference on Applied Linear Algebra, Williamsburg, VA (invited session organizer).
- 2003 August, ISAAC (International Applied Analysis Conference), Toronto, Canada (invited participation).
- 2003 November, Workshop on Theory and Numerics of Matrix Eigenvalue Problems, Banff International Research Station,

- Banff, Canada (invited participation).
- 2003 December, International Conference on Matrix Analysis and Applications, Nova Southeastern University, Fort Lauderdale, Florida.
- 2004 July, International Symposium on Mathematical Theory of Networks and Systems, Leuven, Belgium (invited participation).
- 2004 July, International Workshop on Operator Theory and Applications, University of Newcastle, England.
- 2004 August, Workshop on Linear Operators: Theory, Applications, and Computation, BIRS, Banff, Canada, (invited participation).
- 2004 December, 4th Conference on Operators in Krein spaces, Technical University, Berlin, Germany (invited participation).
- 2005 January, Haifa Matrix Conference, Haifa, Israel (invited participation).
- 2005 April, SEAM Meeting, Lexington, Virginia.
- 2005 May, H. Radjavi Conference, Bled, Slovenia.
- 2005 May, Linear Algebra Workshop, Bled, Slovenia (invited participation).
- 2005 June, workshop on Operator theory, system theory and scattering theory: multidimensional generalizations and related topics, Ben Gurion University, Israel (invited participation).
- 2005 July, International Workshop on Operator Theory and Applications, University of Connecticut, Storrs (invited participation, program committee, session organizer).
- 2005 December, 4th Conference on Operators in Krein Spaces, Technical University, Berlin, Germany (invited participation).
- 2006 January, Conference on Complex Analysis, Nahariya, Israel, (invited participation).
- 2006 July, 13th Conference of International Linear Algebra Society, Amsterdam, The Netherlands (invited participation, session organizer).
- 2006 July, 8th Workshop on Numerical Ranges, Bremen, Germany (co-organizer).
- 2006 July, GAMM - SIAM Conference on Applied Linear Algebra, Düsseldorf, Germany.
- 2006 December, 4th Conference on Operators in Krein spaces and Differential Equations (invited participation).
- 2007 May, Joint meeting of Amer. Math. Society and Sociedad Matematica Mexicana, Zacatecas, Mexico (invited participation).
- 2007 July, International Workshop on Operator Theory and Applications, North-West University, Potchefstroom, South Africa (invited participation).
- 2007 July, Characteristic functions and transfer functions in operator theory and system theory, Ben-Gurion University, Israel (invited participation).
- 2007 September, Classical Analysis Conference, U. of North Carolina.
- 2007 November, Virginia Operator Theory and Complex Analysis Meeting University of Richmond, Virginia (invited participation).
- 2007 November, Meeting in honor of H. Schneider, University of Connecticut, Storrs (invited participation).
- 2007 December, 7th Workshop on Operator Theory in Krein spaces and Spectral Analysis, Technische Universität Berlin (invited participation).
- 2008 May, Linear Algebra Workshop, Kranjska Gora, Slovenia (scientific committee, invited participation).

- 2008 May, Meeting in honor of Gohberg's 80th birthday,
Ben Gurion University, Beer Sheva, Israel (invited participation).
- 2008 July, Internation Workshop on Operator Theory and its Applications,
College of William and Mary, Williamsburg, Virginia (organizing committee).
- 2008 July, WONRA, College of William and Mary, Williamsburg, Virginia
(invited participation.)
- 2008 July, International Symposium on Mathematical Theory of Networks and Systems,
Virginia Tech, Blacksburg, Virginia.

PUBLICATIONS

BOOKS

1. (with I. Gohberg, P. Lancaster), *Matrix Polynomials*, Academic Press,
New York - London, 1982, 409+xiv pp.
2. (with I. Gohberg, P. Lancaster), *Matrices and Indefinite Scalar Products*,
Birkhäuser Verlag, Basel, 1983, 372+xvii pp.
3. (with I. Gohberg, P. Lancaster), *Invariant Subspaces of Matrices with Applications*,
J. Wiley, New York, 1986, 692+xv pp.; re-publication, SIAM, 2006.
4. *An Introduction to Operator Polynomials*, Birkhäuser Verlag, Basel, 1989, 389+xii pp.
5. (with J. A. Ball, I. Gohberg), *Interpolation of Rational Matrix Functions*,
Birkhäuser Verlag, Basel, 1990, 605 pp.
6. (with P. Lancaster), *Algebraic Riccati Equations*, Oxford University Press,
New York, 1995, 480+xvii pp.
7. (with I. Gohberg, P. Lancaster), *Indefinite Linear Algebra and Applications*,
Birkhäuser Verlag, Basel, 2005, 357+xii pp.

EDITED VOLUMES

8. (with I. Gohberg, J. W. Helton (eds.)), *Contributions to Operator Theory
and its Applications, Proc. of 1987 Mesa Conference on Operator Theory
and Functional Analysis, Operator Theory: Advances and Applications*, Vol 35 (1988),
Birkhäuser Verlag, 530 pp.
9. (with J. A. Ball, P. Van Dooren (eds.)), *Special Volume on Matrix Valued Functions,
Linear Algebra and Applications*, Vol 137 - 138 (1990), 748 pp.
10. (with D. O'Leary, H. Shapiro (eds.)), *Proceedings of 3rd Conference of
International Linear Algebra Society, Linear Algebra and Applications*,
Vol 212 - 213 (1994), 554 pp.
11. (with J. A. Ball, J. W. Helton, M. Klaus (eds.)), *Proceedings of the International
Workshop in Operator Theory and its Applications, Virginia Tech, 2002,
Current Trends in Operator Theory and its Applications, Operator Theory:
Advances and Applications*, Vol 149 (2004), Birkhäuser Verlag, xxii + 595 pp.
12. (with H. Bart, I. Koltracht, A. S. Markus (eds.)), *Special Volume dedicated to*

- P. Lancaster, *Linear Algebra and Applications*, Vol 385 (2004), 476 pp.
13. (with C.-K. Li, C. Tretter (eds.)), Proceedings of 8th Workshop on Numerical Ranges and Radii, *Linear and Multilinear Algebra*, Vol 56 (2008).
 14. (with J. A. Ball, V. Bolotnikov, J. W. Helton, I. M. Spitkovsky (eds.)), Recent advances and new directions in applied and pure operator theory, Birkhäuser Verlag, to appear.

REFEREED ORIGINAL RESEARCH PAPERS

15. On the many-armed bandit problem, *Annals of Probability*, 6 (1978), 491 - 498.
16. (with I. Gohberg, P. Lancaster), Spectral analysis of matrix polynomials, I. Canonical forms and divisors. *Linear Algebra and Applications*, 20 (1978), 1 - 44.
17. (with I. Gohberg, P. Lancaster), Spectral analysis of matrix polynomials, II. The resolvent form and spectral divisors. *Linear Algebra and Applications*, 21 (1978), 65 - 88.
18. (with I. Gohberg, P. Lancaster), Representation and divisibility of operator polynomials, *Canadian Math. Journal*, 30, 5 (1978), 1045 - 1069.
19. (with I. Gohberg, M. A. Kaashoek), Spectral analysis of families of operator polynomials and a generalized Vandermonde matrix, I. The finite dimensional case, *Topics in Functional Analysis*, (eds. I. Gohberg and M. Kac), Academic Press (1978), 91 - 128.
20. (with I. Gohberg, M. A. Kaashoek), Spectral analysis of families of operator polynomials and a generalized Vandermonde matrix, II. The infinite dimensional case, *Journal of Functional Analysis*, 30 (1978), 359 - 389.
21. On existence of common multiples of monic operator polynomials, *Integral Equations and Operator Theory*, 1 (1978), 400 - 414.
22. (with I. Gohberg, L. Lerer), On canonical factorizations of operator polynomials, spectral divisors, and Toeplitz matrices, *Integral Equations and Operator Theory*, 1 (1978), 176 - 214.
23. (with I. Gohberg, L. Lerer), Factorization indices for matrix polynomials, *Bull. of Amer. Math. Soc.*, 84 (1978), 275 - 277.
24. (with I. Gohberg), On spectral analysis of non-monic matrix and operator polynomials, I. Reduction to monic polynomials, *Israel Journal of Mathematics*, 30 (1978), 133 - 151.
25. (with I. Gohberg), On spectral analysis of non-monic matrix and operator polynomials, II. Dependence on the finite spectral data, *Israel Journal of Mathematics*, 30 (1978), 321 - 334.
26. (with I. Gohberg), On the spectral structure of monic matrix polynomials and the extension problem, *Linear Algebra and Applications*, 24 (1979), 157 - 172.
27. On analytic equivalence of operator polynomials, *Integral Equations and Operator Theory*, 2 (1979), 48 - 61.
28. (with M. Schaps), On the partial multiplicities of a product of two matrix polynomials, *Integral Equations and Operator Theory*, 2 (1979), 565 - 599.
29. (with I. Gohberg, P. Lancaster), Perturbation theory for divisors of operator polynomials, *SIAM J. of Mathematical Analysis*, 10 (1979), 1161 - 1183.

30. (with I. Gohberg, P. Lancaster), On selfadjoint matrix polynomials, *Integral Equations and Operator Theory*, 2/3 (1979), 434 - 439.
31. (with I. Gohberg, L. Lerer), Stable factorizations of operator polynomials, I. Spectral divisors simply behaved at infinity, *J. of Mathematical Analysis and Applications*, 74 (1980), 401 - 431.
32. (with I. Gohberg, L. Lerer), Stable factorizations of operator polynomials, II. Main results and applications to Toeplitz operators, *Journal of Mathematical Analysis and Applications*, 74 (1980), 401 - 431.
33. (with I. Gohberg, P. Lancaster), Spectral analysis of selfadjoint matrix polynomials, *Annals of Mathematics*, 112 (1980), 33 - 71.
34. (with P. Lancaster), Existence and uniqueness theorems for the algebraic Riccati equation, *International Journal of Control*, 32 (1980), 285 - 309.
35. On extremal solutions of the algebraic Riccati equations, *Algebraic and Geometric Methods in Linear Systems Theory, AMS Lectures in Applied Mathematics*, (eds. C. I. Byrnes and C. F. Martin), 18 (1980), 311 - 327.
36. On connected components in the set of divisors of monic matrix polynomials, *Linear Algebra and Applications*, 31 (1980), 33 - 42.
37. On nonnegative invariant subspaces in indefinite scalar product spaces, *Linear and Multilinear Algebra*, 10 (1981), 1 - 14.
38. Remark on irreducible factorizations of polynomials in several variables, *Canadian Mathematical Bulletin*, 2 (1981), 493 - 496.
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