

Curriculum Vitae

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Ilya M. Spitkovsky

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Education

- 1987 Doctor of Science in Physics and Mathematics (Habilitation Degree)
Georgian Academy of Sciences, Tbilisi
- 1978 Candidate of Science in Physics and Mathematics (Ph.D. Equivalent)
University of Belorussia, Minsk
- 1975 Master of Science (with Honors) in Mathematics and Education
University of Odessa, Ukraine

Academic Positions

- 2013–
Division of Science and Mathematics
New York University Abu Dhabi (NYUAD), UAE
Professor (September 2014 – Present)
Visiting Professor (September 2013 – May 2014)
- 1990–2016
Department of Mathematics
College of William & Mary, Williamsburg, VA
Professor of Mathematics, Emeritus (since November 2016)
Professor (August 1993 – 2016; on leave July 2013 – August 2016)
Associate Professor (August 1992 – August 1993)
Visiting Professor (August 1990 – July 1992)
- 1986–1989
Department of Integral Equations and Boundary Value Problems
Marine Hydrophysical Institute, Ukrainian Academy of Sciences
Leading Research Fellow (October 1988 – November 1989)
Senior Research Fellow (February 1986 – September 1988)
- 1978–1986
Department of Integral Equations and Mathematical Simulation
Economics Institute, Ukrainian Academy of Sciences
Senior Research Fellow (December 1980 – February 1986)
Junior Research Fellow (November 1978 – December 1980)
- 1976–1989
Department of Mathematics
University of Odessa, Ukraine
Professor (September 1987 – July 1989)
Associate Professor (September 1980 – July 1982)
Assistant Professor (February 1976 – July 1978)

Long-Term Research Visits

Instituto Superior Tecnico, Lisbon, Portugal (Spring 2009)
University of Pisa, Italy (Summer 2004)
Katholieke Universiteit Leuven, Belgium (April – May 2003)
Technische Universität Darmstadt, Germany (Summer 1992)

Editorial Positions

Integral Equations and Operator Theory	Editorial Board member (2004 – present)
Operator Theory: Advances and Applications	Associate Editor (2009 – present)
Operators and Matrices	Editorial Board member (2006 – present)
International Journal for Information & Systems Sciences	Associate Editor (2008 – present)
Armenian Journal of Mathematics	Editorial Board member (2008 – present)
International Journal of Mathematics and Mathematical Sciences	Editorial Board member (2009 – present)
Annals of Functional Analysis	Editorial Board member (2014 – present)
Special Matrices	Editorial Board member (2015 – present)
Electronic Journal of Linear Algebra	Associate Editor (2016 – present)

Honors, Prizes and Awards

February 2013	Plumeri Award for Faculty Excellence
May 2010	Simon Teaching Prize
May 1993	Alumni Fellow Teaching Award
September 1984	Certificate Senior Scientist in Mathematical Analysis, awarded by the Academy of Sciences of the USSR
April 1984	Ukrainian Academy of Sciences Award “For the best research in mathematics among young scientists”
1974–1975	Lenin scholarship

Courses Taught

Calculus, linear algebra, foundations of mathematics, analytic geometry, differential equations, real analysis, complex analysis, general topology, functional analysis, operator theory, linear programming, C^* -algebras, boundary value problems, spectral theory of Toeplitz operators, mathematics of finance, introduction to computational algebraic geometry.

Graduate and Undergraduate Advising

Ph.D. Students

1988 Sergei Yatsko University of Odessa, Ukraine
1990 Peter Tishin University of Odessa, Ukraine
1990 Aziz Tashbaev University of Odessa, Ukraine

Post Doctorate Advising

Spring 1996 Torsten Ehrhardt (Technical University of Chemnitz, Germany)
2002–03 AY Josue Ramirez (CINVESTAV, Mexico)
2009–10 AY J. Loreto Hernández (Universidad Autónoma de México)

Honors/Capstone Projects

2005–06 AY	David Rose	Results concerning the Aluthge transform
2006–07 AY	Abraham Isgur	Factorization of some almost periodic matrix functions
2012–13 AY	Tyler Moran	On almost normal matrices
2013–14 AY	Ruey Ting Chien	Numerical ranges of some tridiagonal matrices
2014–15 AY	Mirjana Stevanovic	On arrowhead matrices
	Claire Marie Thomas	On flat portions on the boundary of the numerical range
2016–17 AY	Siyu (Shelley) Zhong	On the normalized numerical range of normal matrices
2017–18 AY	Ali N Hamed	On some classes of matrices with elliptical numerical ranges

Research Experience for Undergraduates (REU)

Sigal Gottlieb, Inequalities involving the numerical radius (Summer 1991, advised jointly with Charlie Johnson),

Mark Gelfand, Almost periodic factorization: Applicability of the division algorithm (Summer 1993),

Dennis Keeler, The numerical range of 3×3 matrices (Summer 1994, advised jointly with Leiba Rodman),

Sudheer Shukla, Equality of higher numerical ranges of matrices and a conjecture of Kippenhahn on hermitian pencils (Summer 1995, advised jointly with Chi Kwong Li),

Darryl Yong, Almost periodic factorization of certain block triangular matrix functions (Summer 1995),

Daniel Quint, New cases of almost periodic factorization of triangular matrix functions (Summer 1996, advised jointly with Leiba Rodman),

Ronald Walker, Almost periodic factorization of block triangular matrix functions revisited (Summer 1997),

Laren Caston and Milena Savova, On eigenvalues and boundary curvature of the numerical range (Summer 1999, advised jointly with Nahum Zobin),

Nicholas McCarthy and David Ogilvie, Birkhoff's theorem and convex hulls of Coxeter groups (Summer 1999, advised jointly with Nahum Zobin),

Walter Lin, Factorization of some triangular almost periodic matrix functions (1999-2000 AY),

Chris Hillar, Positive eigenvalues and two-letter generalized words (Summer 2000, advised jointly with Charlie Johnson),

Ethan Brown, On matrices with elliptical numerical ranges and on flat portions on the boundary of the numerical range (Summer 2002 and 2002-03 AY),

Justin Droba and David Rose, On some properties of the Aluthge transform (Summer 2005),

Anastasia Boryszenko and Bich Hoai, On power dominance of positive semi definite matrices (Summer 2006, advised jointly with Charlie Johnson),

Hakan Seyalioglu, Cones invariant under families of matrices (2006-07 AY, advised jointly with Leiba Rodman),

Ashwin Rastogi, On comparison of the division algorithm and Portuguese transformation approach to explicit factorization of certain matrix functions (2007-08 AY, advised jointly with Leiba Rodman),

Eduard Einstein, The ratio field of values (Summer 2009, advised jointly with Charlie Johnson),

Jeffrey Eldred, Numerical ranges of companion matrices (Spring 2010–Summer 2011),

Daniel Corey and Ryan Kirk, The product field of values (Summer 2011, advised jointly with Charlie Johnson),

Timothy Leake, Multiply generated points of the numerical range (Summer 2012),

Weston Barger, Spectral behavior of skew hermitian matrices under hermitian perturbations (Summer 2012, advised jointly with Charlie Johnson).

Parth Palihar, Continuous selections of the inverse field of values generating function (Summer 2013, advised jointly with Brian Lins).

Andrei-Florin Stoica, Normalized numerical range (2015-16 AY).

Computational Science Training for Undergraduates in the Mathematical Sciences (CSUMS)

Tyler Moran, Numerical ranges of almost normal matrices (Summer 2012),

Zach Price, On the spectra of some cyclic matrices (Summer 2012, advised jointly with Charlie Johnson).

The results of work with undergraduates are published in joint publications [205, 204, 199, 198, 192, 186, 185, 183, 179, 177, 176, 168, 159, 157, 152, 150, 144, 141, 140, 139, 129, 127, 117, 114, 112, 105, 100, 98, 93, 92, 88, 84, 71] with them.

Fellowships and Grants

Grants awarded by outside agencies

- 2013–18 NSF Grant DMS-1331021 “Computational and Statistical theory and techniques in the study of large data sets” \$ 880,000
Senior Personnel
- 2012–16 EU Grant 318910 “Asymptotics of Operator Semigroups”
Scientist in charge on the William & Mary side
- 2005–09 NSF Grant DMS-0456625 “Wiener-Hopf Factorization and its Applications” \$ 153,000
- 2000–04 NSF Grant DMS-9988579 “Problems in Operator and Matrix Theory” \$ 201,489
- 1999 NRC COBASE Grant “Toeplitz Operators with Matrix Semi Almost Periodic Symbols and their Applications in Diffraction Theory” \$ 2,750
- 1998–2000 NSF Grant DMS-9800704 “ Almost Periodic and Multivariable Periodic Matrix Functions: Extensions, Factorizations, Applications” \$ 120,522
- 1997–99 NATO Grant CRG-950332 “Toeplitz Operators and Algebras of Convolution Type Operators” (renewal) \$ 7,400
- 1995–97 NATO Grant CRG-950332 “Toeplitz Operators and Algebras of Convolution Type Operators” \$ 6,234
- 1994–97 NSF Grant DMS-9401848 “Topics in Operator Theory” \$ 67,500
- 1991–93 NSF Grant DMS-9101143 “Matrices, Operators and Factorization” \$ 37,550

Grants received from William & Mary

- 2013 Faculty summer research grant
- 2008 Faculty Research Assignment (taken during 2008-09 academic year)
- 2005 Faculty summer research grant
- 2001 Faculty Research Assignment (taken during 2002-03 academic year)
- 2000 Faculty summer research grant
- 1998 Faculty summer research grant
- 1995 Faculty Research Assignment
- 1994 Faculty summer research grant
- 1993 Faculty summer research grant.

Research

Refereed research papers

213. Robert Sheckley's Answerer for two orthogonal projections, *Operator Theory: Advances and Applications* (with *A. Böttcher*), to appear.
212. Similarity between two projections, *Integral Equations and Operator Theory* **89** (2017), 507–518 (with *A. Böttcher and B. Simon*).
211. On the algorithmization of Janashia-Lagvilava matrix spectral factorization method, *IEEE Transactions on Information Theory* (with *L. Ephremidze and F. Saied*), to appear.
210. On the partial indices of triangular matrix functions with prescribed indices of their diagonal elements, *Operator Theory: Advances and Applications* **262** (2018), 251–285 (with *K. V. Harutyunyan and A. G. Kamalyan*).
209. A distance formula related to a family of projections orthogonal to their symmetries, *Operator Theory: Advances and Applications*, to appear.
208. Operators with compatible ranges in an algebra generated by two orthogonal projections, *Advances in Operator Theory* **3** (2018), 117–122.
207. On Robinsons Energy Delay Theorem, *Transactions of A. Razmadze Mathematical Institute* **171** (2017), 16–23 (with *L. Ephremidze and W. H. Gerstaecker*). **MR3623628**.
206. On non-optimal spectral factorizations, *Georgian Math. J.* (with *L. Ephremidze and I. Selesnik*), to appear.
205. On the normalized numerical range, *Operators and Matrices* **11** (2017), 219–240 (with *A.-F. Stoica*). **MR3602640**.
204. Normal Matrices subordinate to a tree and flat portions of the field of values, *Linear Algebra and its Applications* **507** (2016), 198–207 (with *C. R. Johnson, M. Stevanovic, and M. Turnansky*). **MR3536953**.
203. Pre-images of extreme points of the numerical range, and applications, *Operators and Matrices* **10** (2016), 1043–1058 (with *S. Weis*). **MR3584690**.
202. Numerical ranges of 4-by-4 nilpotent matrices: Flat portions on the boundary, *Operator Theory: Advances and Applications* **259** (2017), 561–591 (with *E. Militzer, L. J. Patton, and M.-C. Tsai*). **MR3674639**.
201. Quantitative results on continuity of the spectral factorization mapping in the scalar case, *Bol. Soc. Mat. Mex.* **22** (2016), 517–527 (with *L. Ephremidze and E. Shargorodsky*). **MR3544152**.

200. Continuity of the maximum entropy inference: Convex geometry and numerical range approach, *Journal of Mathematical Physics* **57** (2016), 015204, 17 pp. (with *L. Rodman, A. Szkola, and S. Weis*).
199. Corrections and additions to ‘Inverse continuity on the boundary of the numerical range’, *Linear and Multilinear Algebra* **64** (2016), 100–104 (with *T. Leake and B. Lins*).
198. Line segments on the boundary of the numerical ranges of some tridiagonal matrices, *Electronic Journal of Linear Algebra* **30** (2015), 693–703 (with *C. M. Thomas*). **MR3426294**.
197. Matrix spectral factorization with perturbed data, *Mem. Differential Equations Math. Phys.* **66** (2015), 65–82 (with *L. Ephremidze*). **MR3454245**.
196. Toeplitz operators of finite interval type and the table method, *Journal of Mathematical Analysis and Applications* **432** (2015), 1148–1173 (with *M. C. Câmara and C. Diogo*). **MR3378415**.
195. Rank-deficient spectral factorization and wavelets completion problem, *International Journal of Wavelets, Multiresolution and Information Processing* **13** (2015), 1550013 (with *L. Ephremidze and E. Lagvilava*). **MR3350063**.
194. Some extremal properties of the partial indices of triangular matrix functions, *Reports. National Academy of Sciences of Armenia* **115** (2015), 87–92 (with *K. V. Harutyunyan and A. G. Kamalyan*). **MR3497382**.
193. On possible tuples of partial indices of triangular matrix functions, *Reports. National Academy of Sciences of Armenia* **115** (2015), 7–14 (with *K. V. Harutyunyan and A. G. Kamalyan*). **MR3469521**.
192. On the numerical ranges of some tridiagonal matrices, *Linear Algebra and its Applications* **470** (2015), 228–240 (with *R. T. Chien*). **MR3314314**.
191. Some aspects of a novel matrix spectral factorization algorithm, *Proceeding of A. Razmadze Mathematical Institute* **166** (2014), 49–60 (with *L. Ephremidze and N. Salia*). **MR3300615**.
190. One sided invertibility of matrices over commutative rings, corona problems, and Toeplitz operators with matrix symbols, *Linear Algebra and its Applications* **459** (2014), 58–82 (with *M. C. Câmara and L. Rodman*).
189. Factorization of matrices with symmetries over function algebras, *Integral Equations and Operator Theory* **80** (2014), 469–510 (with *L. Rodman*).
188. Factorization of some triangular matrix functions and its applications, *Operators and Matrices* **9** (2015), 1–29 (with *Yu. I. Karlovich and Juan Loretto-Hernandez*).

187. On the Gau-Wu Number for Some Classes of Matrices, *Linear Algebra and its Applications* **444** (2014), 254–262 (with *K. Camenga, P. Rault and T. Sendova*). **MR3145844**.
186. Inverse Continuity on the Boundary of the Numerical Range, *Linear and Multilinear Algebra* **62** (2014), 1335–1345 (with *T. Leake and B. Lins*). **MR3261740**.
185. Pre-images of Boundary Points of the Numerical Range, *Operators and Matrices* **8** (2014), 699–724 (with *T. Leake and B. Lins*). **MR3257887**.
184. On the factorization of some block triangular almost periodic matrix functions, *Operator Theory: Advances and Applications* **242** (2014), 25–52 (with *A. Bastos, A. Bravo, and Yu. Karlovich*).
183. The distribution of eigenvalues of doubly cyclic Z_+ -matrices, *Linear Algebra and its Applications* **439** (2013), 3576–3580 (with *C. R. Johnson and Z. Price*). **MR3119872**.
182. On Numerical Ranges of Rank-two Operators, *Integral Equations and Operator Theory* **77** (2013), 441–448 (with *L. Rodman*). **MR3116668**.
181. Numerical range of some doubly stochastic matrices, *Applied Mathematics and Computation* **221** (2013), 40–47 (with *K. Camenga, P. Rault and T. Sendova*).
180. 3-by-3 matrices with elliptical numerical range revisited, *Electronic Journal of Linear Algebra* **26** (2013), 158–167 (with *P. Rault and T. Sendova*). **MR3065855**.
179. On almost normal matrices, *Textos de Matemática* **44** (2013), 131–144 (with *T. Moran*).
178. On the kernel and cokernel of some Toeplitz operators, *Operator Theory: Advances and Applications* **237** (2013), 127–144 (with *T. Ehrhardt*).
177. Continuity properties of vectors realizing points in the classical field of values, *Linear and Multilinear Algebra* **61** (2013), 1329–1338 (with *D. Corey, C. Johnson, R. Kirk and B. Lins*). **MR3175367**.
176. The product field of values, *Linear Algebra and Applications* **438** (2013), 2155–2173 (with *D. Corey, C. Johnson, R. Kirk and B. Lins*). **MR3005282**.
175. The Cauchy singular integral operator on weighted variable Lebesgue spaces, *Operator Theory: Advances and Applications* **236** (2013), 275–291 (with *A. Karlovich*). **MR3203066**.
174. Classification of the finite-dimensional algebras generated by two tightly coupled idempotents, *Linear Algebra and Applications* **439** (2013), 538–551 (with *A. Böttcher*). **MR3057092**.
173. Group inversion in certain finite-dimensional algebras generated by two idempotents, *Indagationes Mathematicae* **23** (2012), 715–732 (with *A. Böttcher*).

172. A remark on polynomial matrix factorization theorem, *Georgian Mathematical Journal* **19** (2012), 489–495 (with *L. Ephremidze*). **MR2984501**.
171. Factorizations, Riemann-Hilbert problems and the Corona Theorem, *J. London Math. Soc.* **86** (2012), 852–878 (with *M. C. Câmara, C. Diogo, and Yu. I. Karlovich*). **MR3000833**.
170. The factorization problem: some known results and open questions, *Operator Theory: Advances and Applications* **229** (2013), 101–122 (with *A. Böttcher*). **MR3060410**.
169. Compressions of linearly independent selfadjoint operators, *Linear Algebra and Applications* **436** (2012), 3757–3766 (with *L. Rodman*). **MR2900751**.
168. Numerical ranges of companion matrices: flat portions on the boundary, *Linear and Multilinear Algebra* **60** (2012), 1295–1311 (with *J. Eldred and L. Rodman*). **MR2989764**.
167. Pseudodifferential operators on variable Lebesgue spaces, *Operator Theory: Advances and Applications* **229** (2013), 173–183 (with *A. Karlovich*). **MR3025495**.
166. Kernels of asymmetric Toeplitz operators and applications to almost periodic factorization, *Complex Analysis and Operator Theory* **7** (2013), 375–407 (with *M. C. Câmara and Yu. I. Karlovich*). **MR3037055**.
165. The possible shapes of numerical ranges. *Operators and Matrices* **6** (2012), 607–611 (with *J. W. Helton*). **MR2987030**.
164. Ratio numerical ranges of operators. *Integral Equations and Operator Theory* **71** (2011), 245–257 (with *L. Rodman*). **MR2012h:47096**.
163. Numerical ranges of Toeplitz operators with matrix symbols, *Linear Algebra and Applications* **436** (2012), 1721–1726 (with *N. Bebiano*).
162. Factorization versus invertibility of matrix functions on compact Abelian groups, *Operator Theory: Advances and Applications* **218** (2012), 225–239 (with *A. Brudnyi and L. Rodman*). **MR2931930**.
161. On singular integral operators with semi-almost periodic coefficients on variable Lebesgue spaces, *Journal of Mathematical Analysis and Applications* **384** (2011), 706–725 (with *A. Karlovich*). **MR2012g:47139**.
160. Non-denseness of factorable matrix functions, *Journal of Functional Analysis* **261** (2011), 1969–1991 (with *A. Brudnyi and L. Rodman*). **MR2012h:47029**.
159. Numerical ranges of cube roots of the identity, *Linear Algebra and Applications* **435** (2011), 2639–2657 (with *T. R. Harris, M. Mazella, L. J. Patton, and D. Renfrew*). **MR2012g:47019**.

158. Constructive factorization of some almost periodic triangular matrix functions with a quadrinomial off diagonal entry, *Journal of Mathematical Analysis and Applications* **376** (2011), 625–640 (with *M. A. Bastos, A. Bravo, and Yu. I. Karlovich*). **MR2012f:47050**.
157. The ratio field of values, *Linear Algebra and Applications* **434** (2011), 1119–1136 (with *E. Einstein, C. R. Johnson and B. Lins*). **MR 2012a:15038**.
156. On certain finite-dimensional algebras generated by two idempotents, *Linear Algebra and Applications* **435** (2011), 1823–1836 (with *A. Böttcher*). **MR 2012d:15039**.
155. Projective free algebras of continuous functions on compact abelian groups, *Journal of Functional Analysis* **259** (2010), 918–932 (with *A. Brudnyi and L. Rodman*). **MR 2011m:46083**.
154. Constructive almost periodic factorization of some triangular matrix functions, *Journal of Mathematical Analysis and Applications* **367** (2010), 416–433 (with *M. C. Câmara and Yu. I. Karlovich*). **MR 2011h:47052**.
153. A gentle guide to the basics of two projections theory, *Linear Algebra and Applications* **432** (2010), 1412–1459 (with *A. Böttcher*). **MR 2010k:47004**.
152. On common invariant cones for families of matrices, *Linear Algebra and Applications* **432** (2010), 911–926 (with *L. Rodman and H. Seyalioglu*). **MR2011d:15051**.
151. Almost periodic polynomial factorization of some triangular matrix functions, *Operator Theory: Advances and Applications* **202** (2010), 337–354 (with *Yu. Karlovich*).
150. Almost periodic factorization of 2×2 triangular matrix functions: New cases of off diagonal spectrum, *Operator Theory: Advances and Applications* **202** (2010), 469–487 (with *A. Rastogi and L. Rodman*). **MR2012a:47045**.
149. Matrices with normal defect one, *Operators and Matrices* **3** (2009), 401–438 (with *D. Kalyuznyi-Verbovetsky and H. Woerdeman*). **MR2011c:47017**.
148. Connectedness of spectra of Toeplitz operators on Hardy spaces with Muckenhoupt weights over Carleson curves, *Integral Equations and Operator Theory* **65** (2009), 83–114 (with *A. Karlovich*). **MR 2010j:47034**.
147. Drazin inversion in the von Neumann algebra generated by two orthogonal projections, *J. Math. Anal. Appl.* **358** (2009), 403–409 (with *A. Böttcher*). **MR 2010e:47003**.
146. Almost periodic factorization of some triangular matrix functions, *Operator Theory: Advances and Applications* **190** (2009), 171–190 (with *M. C. Câmara and Yu. I. Karlovich*). **MR 2010k:47038**

145. Algebras of almost periodic functions with Bohr-Fourier spectrum in a semigroup: Hermite property and its applications, *Journal of Functional Analysis* **255** (2008), 3188–3207 (with *L. Rodman*). **MR 2009k:46088**.
144. On the spectra of some Toeplitz and Wiener-Hopf operators with almost periodic matrix symbols, *Operators and Matrices* **2** (2008), 371–383 (with *A. Isgur*). **MR 2009g:47077**.
143. On the norms of singular integral operators on contours with intersections, *Complex Analysis and Operator Theory* **2** (2008), 617–626 (with *N. Ya. Krupnik*). **MR 2009m:47122**.
142. Spectral factorization, unstable canonical factorization, and open factorization problems in control theory, *Operator Theory: Advances and Applications* **181** (2008), 321–346 (with *K. M. Mikkola*). **MR 2011k:47033**.
141. On the stabilization of the Aluthge sequence, *International Journal of Information and System Sciences* **4** (2008), 178–189 (with *D. Rose*). **MR 2009d:15066**.
140. Spectral dominance and commuting chains, *Proceedings of the AMS* **136** (2008), 2019–2029 (with *B. Hoai and C. R. Johnson*). **MR 2009f:47025**.
139. On the numerical range behavior under the generalized Aluthge transform, *Linear and Multilinear Algebra* **56** (2008), 163–177 (with *D. Rose*). **MR 2009b:15073**.
138. On generalized numerical ranges of quadratic operators, *Operator Theory: Advances and Applications* **179** (2007), 241–256 (with *L. Rodman*). **MR 2009d:47007**.
137. Factorization in weighted Wiener matrix algebras on linearly ordered Abelian groups, *Integral Equations and Operator Theory* **58** (2007), 65–86 (with *T. Ehrhardt, C. van der Mee and L. Rodman*). **MR 2008b:46075**.
136. Sets of matrices with given joint numerical range, *Linear Algebra and Applications* **419** (2006), 569–585 (with *N. Krupnik*). **MR 2008c:15045**.
135. On polynomials in two projections, *Electronic J. Linear Algebra* **15** (2006), 154–158. **MR 2007b:47006**.
134. Factorization of matrix functions with subgroup supported Fourier coefficients, *J. Math. Anal. Appl.* **323** (2006), 604–613 (with *L. Rodman*). **MR 2009b:43015**.
133. Factorization of block triangular matrix functions with off-diagonal binomials, *Operator Theory: Advances and Applications* **160** (2005), 425–439 (with *C. van der Mee and L. Rodman*). **MR 2007j:47040**.
132. Analytic roots of invertible matrix functions, *Electronic Journal of Linear Algebra* **13** (2005), 187–196 (with *L. Rodman*). **MR 2006g:47022**.

131. Shift techniques and canonical factorizations in the solution of M/G/1-type Markov chains, *Stochastic Models* **21** (2005), 279–302 (with *D. Bini and B. Meini*). **MR 2006a:60133**.
130. 3×3 matrices with a flat portion on the boundary of the numerical range, *Linear Algebra and Applications* **397** (2005), 193–207 (with *L. Rodman*). **MR 2005i:15047**.
129. On flat portions on the boundary of the numerical range, *Linear Algebra and Applications* **390** (2004), 75–109 (with *E. Brown*). **MR 2005g:15044**.
128. Factorization of block triangular matrix functions in Wiener algebras on ordered Abelian groups, *Operator Theory: Advances and Applications* **149** (2004), 441–465 (with *C. van der Mee, L. Rodman and H. Woerdeman*).
127. On matrices with elliptical numerical ranges, *Linear and Multilinear Algebra* **52** (2004), 177–193 (with *E. Brown*). **MR 2005j:15030**.
126. Finite reflection groups and linear preserver problems, *Rocky Mountain Journal of Mathematics* **34** (2004), 225–251 (with *C.K. Li and N. Zobin*).
125. Noncanonical factorizations of almost periodic multivariable matrix functions, *Operator Theory: Advances and Applications* **142** (2003), 311–344 (with *L. Rodman and H. J. Woerdeman*). **MR2006d:47034**.
124. C^* -algebra of singular integral operators with semi-almost periodic coefficients, *Journal of Functional Analysis* **204** (2003), 445–484 (with *A. Böttcher and Yu. Karlovich*). **MR 2004j:47057**.
123. On the algebra generated by a poly-Bergman projection and a composition operator *Factorization, Singular Operators, and Related Problems*. Kluwer (2003), 273–289 (with *J. Ramirez*). **MR 2004g:47093**.
122. An overview of matrix factorization theory and operator applications, *Operator Theory: Advances and Applications* **141** (2003), 1–102 (with *I. Gohberg and M. A. Kaashoek*). **MR 2004j:47034**.
121. Block Toeplitz operators with frequency modulated semi-almost periodic symbols, *International Journal of Mathematics and Mathematical Sciences* **34** (2003), 2157–2176 (with *A. Böttcher and S. Grudsky*). **MR 2004d:47060**.
120. On numerical ranges and roots, *J. Math. Anal. Appl.* **282** (2003), 329–340 (with *C. K. Li and L. Rodman*). **MR 2004g:47009**.
119. On the essential spectrum of Toeplitz operators with semi-almost periodic symbols, *Operator Theory: Advances and Applications* **142** (2003), 59–77 (with *A. Böttcher and S. Grudsky*). **MR 2006i:47048**.

118. Toeplitz corona problem for algebras of almost periodic functions, *Operator Theory: Advances and Applications* **135** (2002), 25–37 (with *J. Ball and L. Rodman*). **MR 2003i:42014**.
117. Convex hulls of Coxeter groups, *Functions Spaces, Interpolation Spaces and Related Problems in Analysis, De Gruyter* (2002), 213–240 (with *J. Brandman, J. Fowler, B. Lins and N. Zobin*). **MR 2003j:51009**.
116. Abstract band method via factorization, positive and band extensions of multivariable almost periodic matrix functions, and spectral estimation, *Memoirs of the Amer. Math. Soc.* **762** (2002), 71 pp. (with *L. Rodman and H. J. Woerdeman*). **MR 2003h:47029**.
115. Contractive extension problems for matrix valued almost periodic functions of several variables, *Journal of Operator Theory* **47** (2002), 3–35 (with *L. Rodman and H. J. Woerdeman*). **MR 2003k:42025**.
114. Birkhoff’s theorem and convex hulls of Coxeter groups, *Linear Algebra and Applications* **347** (2002), 219–231 (with *N. McCarthy, D. Ogilvie and N. Zobin*). **MR 2003g:51012**.
113. Fredholmness and invertibility of Toeplitz operators with matrix almost periodic symbols, *Proceedings of the AMS* **130** (2002), 1365–1370 (with *L. Rodman and H. J. Woerdeman*) **MR 2002k:47059**.
112. Positive eigenvalues and two-letter generalized words, *Electronic Journal of Linear Algebra* **9** (2002), 21–26 (with *C. Hillar and C. R. Johnson*) **MR 2002k:15020**.
111. Factorization of piecewise constant matrix functions and systems of linear differential equations, *Algebra and Analysis* **13** (2001), 56–123 (with *T. Ehrhardt*).
110. Factorization of almost periodic matrix functions of several variables and Toeplitz operators, *Operator Theory: Advances and Applications* **122** (2001), 385–416 (with *L. Rodman and H. J. Woerdeman*) **MR 2002f:47063**.
109. Multiblock problems for almost periodic matrix functions of several variables, *New York J. Math.* **7** (2001), 117–148 (with *L. Rodman and H. J. Woerdeman*) **MR2002h:42013**.
108. Toeplitz operators with semi-almost periodic matrix symbols on Hardy spaces, *Acta Appl. Math.* **65** (2001), Nos. 1–3, 115–136 (with *A. Böttcher and Yu. Karlovich*) **MR 2002h:47041**.
107. On ρ -contractive 2×2 matrices and their infinite dimensional generalizations, *Linear Algebra and Applications* **325** (2001), 177–189 (with *K. Okubo*) **MR 2003a:47011**.
106. Toeplitz operators with frequency modulated semi-almost periodic symbols, *Journal of Fourier Analysis and Applications* **7** (2001), 523–535 (with *A. Böttcher and S. M. Grudsky*) **MR 2002e:47029**.

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26. Analytic solution of the model Boltzmann equation with the collision operator of compound type, *Modern mathematical methods in transport theory, Proc. 11th Int. Conf. Symp.*, Blacksburg/VA (USA) 1989, *Operator Theory: Advances and Applications* **51** (1991), 189–199 (with *A.V.Latyshhev, M.N.Gajdukov*).
25. Toeplitz operators with PC symbols in weighted spaces, *Abstracts of papers presented to the American Mathematical Society* **12** (1991), no. 1, 123.
24. On convergence of approximate solutions for one class of singular integral operators, *Proceedings of the All-Union school on Approximation Theory* (1989), 96–98 (with *G.S.Litvinchuk, A.M.Tashbaev*).
23. Matrix Riemann-Hilbert boundary value problem and its application in the kinetic theory, *Proceedings of the 4th International Conference on the differential equations and applications*, Ruse, Bulgaria (1989), 433–443 (with *A.V.Latyshhev*).
22. Singular integral operators in $L_{p,\rho}$ spaces with the Muckenhoupt weight, *Proceedings of the regional Conference “Linear operators in functional spaces”*, Grozny (1989), 155–156.
21. Factorization of some block-triangular almost-periodical matrix functions, *Proceedings of the 14th All-Union school on the operator theory in functional spaces*, Novgorod (1989), 49 (with *P.M.Tishin*).
20. On the stability of finite section method for some singular integral equations in Fl_p , *Proceedings of the 4th All-Union Symposium “Methods of discrete singularities in the problems of mathematical physics”*, Kharkov (1989), 253–256 (with *A.M.Tashbaev*).
19. Factorization of piecewise constant 2×2 -matrices and its applications, *Proceedings of the 13th All-Union school on the operator theory in functional spaces*, Kuibyshev (1988), 176–177 (with *A.M.Tashbaev*).
18. On some systems of singular integral equations which are solvable in an explicit form, *Proceedings of the Republican Conference on differential and integral equations and their applications*, Odessa (1987), 99–100 (with *A.M.Tashbaev*).
17. On operators from the algebra generated by two orthoprojections, *Proceedings of the 12th All-Union school on the operator theory in functional spaces*, Tambov (1987), 86.
16. On the factorization of measurable matrix functions in $L_{p,\rho}$ classes with power weight, *Proceedings of the 3rd All-Union Symposium “Method of discrete singularities in the problems of mathematical physics”*, Kharkov (1987), 156–158.
15. New applications of the Factorization method in integral equations, *Proceedings of the 9th Soviet-Czechoslovak Conference “Applications of functional methods in mathematical physics”*, Donetsk (1986), 90 (with *G.S.Litvinchuk*).

14. On the factorization of almost-periodic matrix-functions, *Proceedings of the 11th All-Union school on the operator theory in functional spaces*, Cheljabinsk (1986), 115.
13. On the solvability of generalized Carlemann boundary value problem, *Proceedings of the regional scientific Conference*, Kuibyshev (1984), 67–68 (with *Yu.D.Latushkin, G.S.Litvinchuk*).
12. Singular integral equations with piecewise-sectorial matrix coefficients, *Proceedings of the 8th All-Union school on the operator theory in functional spaces*, Riga (1983).
11. Model of “predator-victim” type of the association structured by the parameter, *Proceedings of the Republican Conference “Theory and practise of imitating simulation of compound systems”*, Odessa (1983) (with *Yu.D.Latushkin*).
10. Applications of integral and functional equations in problems of economical-ecological systems simulation, *Proceedings of the Republican Conference “Integral equations in applied simulation”*, Kiev (1983) (with *V.K.Bulitko, A.A.Karelin*).
9. Singular integral operators with matrix coefficients of class *SAP* and their applications to the systems of convolution type equations on a finite interval, *Proceedings of the Conference “High speed hydrodynamics and boundary value problems”*, Krasnodar (1982) (with *Yu.I.Karlovich*).
8. Noethericity, n - and d -normality of singular integral operators with matrix coefficients admitting the discontinuities of semi-almost-periodic type, *Proceedings of the 7th All-Union school on the operator theory in functional spaces*, Minsk (1982) (with *Yu.I.Karlovich*).
7. The Noether theory of the systems of convolution type equations in spaces of Bessel potentials, *Proceedings of the 3rd Republican Symposium on differential and integral equations*, Odessa (1982), 194–195.
6. A criterion for the subnormality of operators, *Proceedings of the 15th Voronezh winter mathematical school*, Manuscript no. 5691–81, deposited at VINITI 12/16/81, 103–104.
5. One model of separable programming in the problem of fleet’s and port’s resources distribution, *Proceedings of the 1st All-Union Conference “Management of production and automatized systems of management”*, Moscow, 1980 (with *G.A.Besfamilny*).
4. On the simulation of the optimization problem of freight ship’s treatment, the same *Proceedings* (with *G.A.Besfamilny*).
3. Some peculiarities of forming of water resources economical estimate, *Proceedings of the Republican Conference “Application of mathematical methods in economical and ecological researches of water environment”* (with *A.N.Bukreev*), Odessa, 1979 .

2. The stability of the generalized Riemann boundary value problem, *Proceedings of the 2nd Republican Symposium on Differential and Integral equations*, Odessa, 1978 (with *G.S.Litvinchuk*).
1. Theorems on stability and estimates of partial indices of Riemann boundary value problem and their applications, *Proceedings of the 4th Republican Conference of Byelorussian mathematicians*, Minsk, 1975.

Research reports from contract work

4. Mathematical models of economical-ecological processes, Manuscript no. 5505–86, deposited at VINITI 07/28/86, 93 pp. (with *V.K.Bulitko*, *Yu.D.Latushkin*).
3. Analysis and optimization of the interaction in the “fleet-port” system, *Scientific Report* (1982), Economics and Ecology of the World Ocean Branch of the Marine Hydrophysical Institute, Ukrainian Academy of Sciences (with *G.A.Besfamilny*).
2. On the methodology of economical estimate and quality control of water resources, *Scientific Report* (1980), Economical Institute, Ukrainian Academy of Sciences (with *G.S.Litvinchuk*, *Yu.I.Karlovich*).
1. Improvement of the economic machinery of sea transport, *Scientific Report* (1980), Economical Institute, Ukrainian Academy of Sciences (with *G.A.Besfamilny*).

Other publications

26. Remembering Leiba Rodman 1949–2015), *Operator Theory: Advances and Applications* **262** (2018), 3–12 (with *J. A. Ball*, *M. A. Kaashoek*, and *A. C. M. Ran*).
25. The beginning (the way I remember it), *Operator Theory: Advances and Applications* **259** (2017), 41–46. **MR3644511**.
24. Preface to the special LAA volume, *Linear Algebra and its Applications* **470** (2015), 1–3 (with *J. Ball*, *J. Berndt*, and *C. Mehl*).
23. Special types of Matrices, *Handbook of Linear Algebra, 2nd edition*, CRC Press, Boca Raton, FL, 2014, 22-1–22-20 (with *A. Böttcher*).
22. Preface and Introduction to Convolution Equations and Singular Integral Operators, *Operator Theory: Advances and Applications* **206**, Birkhäuser–Verlag, Basel–Boston, 2010, vii–xxii (with *L. Lerer* and *V. Olshevsky*).
21. The XIXth International Workshop on Operator Theory and its Applications, *Operator Theory: Advances and Applications* **202**, Birkhäuser–Verlag, Basel–Boston, 2010, ix–xi (with *J. A. Ball*, *V. Bolotnikov*, *J. W. Helton* and *L. Rodman*).

20. Short biography of Shmuel Friedland for his special LAA volume, *Linear Algebra and Applications* **431** (2009), 2277–2284 (with *A. Berman, C. Krattenthaler, S. M. Ramp and F. Zhang*).
19. Drazin inversion in the von Neumann algebra generated by two orthogonal projections, *Preprint 2009–02, Technische Universität Chemnitz* (2009), 11 pp. (with *A. Böttcher*).
18. My Gohberg encounters, *Israel Gohberg and Friends. On the Occasion of his 80th Birthday*, Birkhäuser (2008), 321–322.
17. Introduction. Special issue dedicated to Antonio Avantaggiati on the occasion of his 70th birthday, *Acta Appl. Math.* **65** (2001), Nos. 1–3, 1–7 (with *G. Bruno and A. Pankov*).
16. Toeplitz operators with semi-almost periodic matrix symbols on Hardy spaces, *Preprint # 276, Departamento de Matemáticas, CINVESTAV del I.P.N.* (2000), 23 pp. (with *A. Böttcher and Yu. Karlovich*).
15. Factorization of piecewise constant matrix functions and systems of linear differential equations, *Preprint 1999-048, MSRI*, 59 pp. (with *T. Ehrhardt*).
14. Two papers on inverse problems for the partial indices of matrix functions, *Preprint 98-34, Technische Universität Chemnitz, Fakultät für Mathematik* (1998), 41 pp. (with *A. Böttcher and S. M. Grudsky*).
13. Almost periodic factorization of block triangular matrix functions revisited, *Preprint 28/98, Instituto Superior Técnico, Departamento de Matemática* (1998), 35 pp. (with *Yu. Karlovich and R. Walker*).
12. On totally real non-compact manifolds globally foliated by analytic discs, *Preprint 97-08, Technische Universität Bergakademie Freiberg* (1997), 17 pp. (with *E. Wegert and G. Khimchiachvili*).
11. Almost periodic factorization of block triangular matrix functions with a singular constant term in their off-diagonal block, *Technical Report 97-1, University of Washington, Department of Applied Mathematics* (1997), 47 pp. (with *D. Yong*).
10. On a new algorithm for almost periodic factorization, *Preprint 12/96, Instituto Superior Técnico, Departamento de Matemática* (1996), 21 pp. (with *M. A. Bastos, Yu. Karlovich and P. Tishin*).
9. Singular integral operators on composed curves, *Preprint, Technische Universität Chemnitz-Zwickau* (1996), 78 pp. (with *C. Bishop, A. Böttcher, and Yu. Karlovich*).
8. Pseudodifferential operators with heavy spectrum *Preprint 246/7, Technische Universität Chemnitz* (1993), 19 pp. (with *A. Böttcher*).

7. Generalized Abel integral operators on the spaces with Rooney weights, *Preprint 1514, Techn. Hochsch. Darmstadt, FB Mathematik* (1992), 7 pp. (with *F. Penzel*).
6. Matrix Riemann-Hilbert boundary value problem in the problems of isothermal and thermal gas gliding, Manuscript no. 580-B89, deposited at VINITI 01/24/89, 3–42 (with *A. V. Latyshev*).
5. Factorization of some piecewise constant matrix functions and its applications, Manuscript no. 4726-B88, deposited at VINITI 06/15/88, 35 pp. (with *A. M. Tashbaev*).
4. Application of differential equations in some natural science problems, *Methodical Report* (1988), 25 pp. (with *A. N. Kvitko*), Odessa State Pedagogical Institute.
3. Factorization of matrix functions and its applications, *Doctoral dissertation* (1987), 300 pp., Mathematical Institute, Georgian Academy of Sciences, Tbilisi.
2. Noethericity criterion for block-triangular operators and problems of the theory of matrix function factorization, Manuscript no. 2543-81, deposited at VINITI 05/28/81, 23 pp. Annotation in *Sibirsky Matem. Zh.* **23** (1982), no. 1.
1. Factorization of measurable matrix functions and its applications to boundary value problems for analytic functions, *Candidates dissertation* (1978), 160 pp., Byelorussian State University, Minsk.

Public presentations (from 1988)

1988

- January 21st Voronezh winter mathematical school, USSR
February Conference on bounded value problems devoted to the memory of F. Gahov, Odessa, USSR (plenary talk)
June All-Union Conference on approximate solving of integral equations, Pushchino, USSR
August International Conference on Operator Theory: Advances and Applications, Calgary, Alberta, Canada (plenary talk)
September All-Union Conference on Integral Equations and Mathematical Analysis, Teberda, USSR
October Technical University, Chemnitz, and Leipzig University, Germany (colloquia talks)
13th All-Union school on the Operator Theory in Function Spaces, Kuibyshev, USSR

1989

- January 22nd Voronezh winter mathematical school, USSR
February 2nd Conference on bounded value problems devoted to the memory of F.Gahov, Odessa, USSR
March All-Union Conference on Complex Analysis and its applications, Chernogolovka, USSR (plenary talk)
May Mathematical Institute, Polish Academy of Sciences, Krakow, Poland (series of lectures),
October International seminar on Schur Analysis, Leipzig, Germany
December Vienna University, Austria

1990

- April Conference on Function Spaces, South Illinois University, Edwardsville (plenary talk)
College of William and Mary, Williamsburg, VA
May City College, City University of New York
October University of Maryland, College Park
November 2nd SIAM Conference on Linear Algebra in Signals, Systems & Control, San Francisco, CA

1991

- January Brigham Young University, Provo, Utah
Joint Mathematics Meeting of AMS, MAA, SIAM, San-Francisco, CA
7th Annual South-Eastern Analysis Meeting, University of North Carolina at Charlotte
February Howard University, Washington, DC
March West Virginia University, Morgantown, WV

	University of Toronto, Canada
April	University of Oklahoma, Norman
May	Carleton University, Ottawa, Canada
	Canadian Operator Symposium, University of Montreal, Canada
	Great Plains Operator Theory Symposium, Texas A&M University, College Station, TX
September	4th SIAM Conference on Applied Linear Algebra, University of Minnesota, MN
November	Virginia Polytechnic Institute and State University, Blacksburg
1992	
March	8th Annual South-Eastern Analysis Meeting, University of Tennessee, Knoxville
May	Great Plains Operator Theory Symposium, University of Iowa, Iowa City
	Instituto Superior Tecnico and Universidade de Lisboa, Lisbon, Portugal
June	Chemnitz Technical University, Germany
July	Institute for Applied Analysis and Stochastics, Berlin, Germany
	Technische Hochschule, Darmstadt, Germany
	First European Congress of Mathematics, Paris, France
	Workshop on Matrix Theory, University of Bielefeld, Germany
August	2nd Conference of the International Linear Algebra Society, Lisbon, Portugal
	Workshop on Numerical Ranges and Numerical Radii, College of William and Mary
September	Wabash Modern Analysis Conference, Indianapolis, IA (plenary talk)
	Toeplitz and Wiener-Hopf Operators Conference, University of California, Santa Cruz, CA
1993	
March	Old Dominion Operator Theory and Analysis Conference, University of Richmond, VA
	9th Annual South-Eastern Analysis Meeting, Memphis State University, TN
April	881st Meeting of the AMS, Howard University, Washington, D.C.
October	Northeastern Operator Algebra/Operator Theory Meeting
	West Chester University, PA
	Functional Analysis on the Eve of the Twenty-first Century, Rutgers University, New Brunswick, NJ
1994	
January	International Conference on Harmonic Analysis and Operator Theory
	Caracas, Venezuela (plenary talk)
	International Meeting on Singular Integral and Pseudo-Differential Operators and their Applications, Oberwolfach, Germany
March	891st Meeting of the AMS, Kansas State University
	SUNY at Buffalo, Buffalo, NY

April Third Old Dominion Operator Theory and Analysis Conference,
 University of Richmond, VA
 May Second Conference on Function Spaces, South Illinois University,
 Edwardsville
 Banach International Mathematical Center, Warsaw, Poland
 Chemnitz Technical University, Germany
 Mining Academy of Freiberg , Germany
 June The Interaction between Functional Analysis, Harmonic Analysis,
 and Probability, University of Missouri at Columbia
 18th Symposium on Real Analysis, University of Virginia, Charlottesville
 July Instituto Superior Tecnico, Lisbon, Portugal
 August 2nd Workshop on “Numerical ranges and numerical radii”,
 University of Coimbra, Portugal
 October The legacy of Norbert Wiener: A centennial symposium, MIT, Cambridge, MA
 November 896th Meeting of the AMS, University of Richmond, VA
 Universidad Autonoma, Madrid, Spain
 December International Conference on Operator Theory for Complex and
 Hypercomplex Analysis, Mexico City, Mexico

1995

March German-Israeli Workshop on Linear One-Dimensional
 Singular Integral Operators, Tel Aviv, Israel
 Bar-Ilan University, Ramat Gan, Israel
 April Conference on Mathematical Analysis and Automatic Control,
 University of Alabama, Tuscaloosa, AL
 May Instituto Superior Tecnico, Lisbon, Portugal
 University of Algarve, Faro, Portugal
 June NSF-CBMS Conference on Approximation Dynamics with Applications
 to Numerical Analysis, University of Missouri, Columbia, MO
 August International Workshop on Operator Theory and Applications,
 University of Regensburg, Germany
 October Wabash Modern Analysis Seminar, Crawfordsville, IN
 Indiana University, Bloomington, IN

1996

March Minisymposium on Systems of Singular Integral Equations on Composed Curves,
 Technische Universität Chemnitz-Zwickau, Germany
 Hagen Universität, Hagen, Germany
 12th Annual South-Eastern Analysis Meeting, University of Richmond, VA
 May Vrije Universiteit, Amsterdam, the Netherlands
 Delft Universitet of Technology, Delft, the Netherlands
 Technische Hochschule, Darmstadt, Germany

- June Great Plains Operator Theory Symposium, Arizona State University, Tempe, AZ
International Workshop on Operator Theory and Applications,
Indiana University, Bloomington, IN
- August 6th Conference of the International Linear Algebra Society,
Chemnitz, Germany
- October University of Maryland, College Park
- December Conference on Modern Banach Space Theory, Kent State University, OH
- 1997
- January 918th Joint Meeting of the AMS, MAA and SIAM, San Diego, CA
- March International Conference “Mathematics Today and Tomorrow”,
University of Central Florida, Orlando
- May XIII South Eastern Analysis Meeting, University of Florida, Gainesville
Workshop on Matrix and Group Theory, Universidade de Coimbra, Portugal
Instituto Superior Tecnico, Lisbon, Portugal
Universidade de Lisboa, Portugal
- June First International Congress of the ISAAC (International Society for Analysis,
its Applications and Computation), University of Delaware, Newark
- 1998
- May International Conference “Fourier Analysis and Applications”,
Kuwait University, Kuwait
Universita degli Studi di Roma “La Sapienza”, Italy (series of lectures)
Third Conference on Function Spaces, South Illinois University, Edwardsville
- June University of Namur, Belgium (series of lectures)
Fourth Workshop on Numerical Ranges and Numerical Radii,
University of Wisconsin - Madison
7th Conference of the International Linear Algebra Society (ILAS)
University of Wisconsin - Madison
- July International Workshop on Operator Theory and Applications
University of Groningen, the Netherlands
- August International Congress of Mathematicians, Berlin, Germany
- November Virginia Operator Theory and Complex Analysis Meeting,
University of Richmond (two plenary talks)
- 1999
- January University of Toronto, Canada
- March 940th Meeting of the AMS, University of Florida, Gainesville
International Conference on Recent Advances in Analytic
and Numerical Treatment of Operator Equations, Klaffenbach, Germany
- May 15th Annual South-Eastern Analysis Meeting, Vanderbilt University, Nashville TN

2000

- January Joint Mathematics Meeting of AMS, MAA, SIAM, Washington, D.C.
 March XVI South Eastern Analysis Meeting, Charlottesville, VA
 May University of Erlangen, Germany
 Academy of Czech Republic, Prague
 June International Workshop on Operator Theory and Applications,
 Bordeaux, France
 5th International Workshop on the Numerical Ranges, Nafplio, Greece
 September International Workshop on Operator Theory and Applications
 Summer School on Factorization and Integrable Systems
 University of Algarve, Faro, Portugal
 December North-South Analysis seminar at CINVESTAV, Mexico City, Mexico

2001

- February Matrix Theory Seminar, University of Coimbra
 March XVII South Eastern Analysis Meeting, University of Georgia, Athens, GA
 April International Conference on Toeplitz Matrices in Honor of Bernd Silbermann,
 Pobershau/Erzgebirge, Germany
 June University of Algarve, Faro, Portugal
 Instituto Superior Tecnico, Lisbon, Portugal
 Computational methods and function theory, University of Aveiro, Portugal
 July SIAM Conference on control and its applications, San Diego, CA
 August Third International Congress of the ISAAC (International Society
 for Analysis, its Applications and Computation), Berlin, Germany
 October Trends in Banach spaces and Operator Theory, Memphis, TN
 November Integrable Systems Seminar, Duke University, NC

2002

- January International Conference on Factorization, Singular Operators
 and Related Problems, Universidade da Madeira, Portugal
 March XVIII South Eastern Analysis Meeting, University of North Carolina, Chapel Hill
 University of Arkansas, Fayetteville (colloquium talk)
 975th AMS Meeting, Georgia Tech, Atlanta, GA
 Georgia State University, Atlanta (colloquium talk)
 April University of Leeds, UK (colloquium talk)
 Functional Analysis seminar, University of Newcastle, UK
 May University of Sussex, UK
 London Analysis seminar, UK
 Yorkshire Functional Analysis group, UK
 June 6th International Workshop on the Numerical Ranges, Auburn University, AL
 August Bell Laboratories, Lucent Technologies, NJ
 September San Francisco State University, CA (colloquium talk)

October Abò Akademie, Finland
 Analysis Seminar, Michigan State University, East Lansing
 Kent State University, OH (colloquium talk)

November 982nd Meeting of the AMS, University of Central Florida, Orlando
 University of Bremen, Germany
 Chemnitz Technical University, Germany

December Matrix Theory Seminar, University of Coimbra,
 Instituto Superior Tecnico, Lisbon, Portugal

2003

January IUPUI, IN (colloquium talk)

February Seminar of the Numerical Analysis and Computational Mathematics Group,
 University of Cagliari, Italy
 Seminar of the Department of Mathematics, University of Pisa, Italy

March XIX South Eastern Analysis Meeting, University of Tennessee, Knoxville, TN

April Analysis Seminar, University of California, Berkeley
 Cal Poly State University, San Luis Obispo (colloquium talk)
 Operator Theory Seminar talk, Cal Poly State University, San Luis Obispo

May Universite Catholique de Louvain, Belgium
 Vrije Universiteit, Amsterdam, the Netherlands
 Third Conference of the European Research Network “Analysis and Operators”
 Tenerife, Canary Islands, Spain
 University of Namur, Belgium

August Fourth International Congress of the ISAAC (International Society
 for Analysis, its Applications and Computation), Toronto, Canada

December International Conference on Matrix Analysis and Applications,
 Nova Southeastern University, Fort Lauderdale, Florida

2004

February University of Virginia, Charlottesville (colloquium talk)

March Florida Atlantic University, Boca Raton (colloquium talk)

June University of Pisa, Italy (crash lecture course)

November Southern California Matrix Meeting, San Jose State University, CA

2005

April University of Central Florida, Orlando (colloquium talk)
 XXI South Eastern Analysis Meeting, Washington and Lee University,
 Lexington, VA

May New Perspectives for Boundary Value Problems and their Asymptotics
 NSF-CBMS research conference, UTPA, Edinburg, TX

June 5th International Conference on Matrix Analytic Methods in Stochastic Models
 Pisa, Italy (plenary talk)

- July International Workshop on Operator Theory and Applications,
Storrs, CT (semi-plenary talk)
- December Seminar talks, Universities of Minho, Porto, and Coimbra, Portugal
- 2006
- February Special Semester on Gröbner Bases and Related Methods,
Radon Institute for Computational and Applied Mathematics, Linz, Austria
- March XXII South Eastern Analysis Meeting, University of Florida, Gainesville, FL
University of Miami (colloquium talk)
- July 8th Workshop on “Numerical ranges and numerical radii”,
University of Bremen, Germany
- August International Workshop on Operator Theory and Applications,
Seoul National University, South Korea (plenary talk)
- September International Workshop on Operator Algebras, Operator Theory and Applications,
Instituto Superior Tecnico, Lisbon, Portugal (plenary talk)
- December 2nd International Workshop on Matrix Analysis and Applications
Nova Southeastern University, Fort Lauderdale, Florida
- 2007
- January CINEVESTAV, Mexico City, Mexico (colloquium talk)
- March University College, London (colloquium talk)
XXIII South Eastern Analysis Meeting, University of Richmond, VA
- April 1027th AMS meeting, University of Arizona, Tucson
(invited special session talk)
- May Drexel University (colloquium talk)
AMS-SMM Joint Meeting, Zacatecas, Mexico (invited special session talk)
- June Instituto Superior Tecnico, Lisbon, Portugal
(Functional Analysis and Applications seminar)
- July Cal Poly State University, San Luis Obispo (colloquium talk)
- September Workshop on the Riemann-Hilbert problem and Toeplitz operators,
Heriot-Watt University, Edinburgh, Scotland (plenary talk)
- 2008
- January Instituto Superior Tecnico, Lisbon, Portugal
(Functional Analysis and Applications seminar)
- April University of Alaska Fairbanks, AK (colloquium talk)
- May International Workshop on Analysis, Operator Theory and Applications
Cancun, Mexico (plenary talk)
6th International Conference on Differential Equations and Dynamical Systems
Morgan State University, Baltimore, MD (invited special session talk)
5th Linear Algebra Workshop, Kranjska Gora, Slovenia
- June 15th Conference of the International Linear Algebra Society (ILAS)

- July Cancun, Mexico (plenary talk)
9th International Workshop on the “Numerical Ranges and Numerical Radii”,
The College of William and Mary
- September Brown University, Providence, RI (Analysis seminar)
- November Virginia Operator Theory and Complex Analysis Meeting,
Virginia Commonwealth University, Richmond (plenary talk)
Workshop on Toeplitz-like operators and related topics, CINVESTAV,
Mexico City, Mexico (plenary talk)
- 2009
- January The University of Southern Mississippi, Hattiesburg, MS (colloquium talk)
University of South Alabama, Mobile, AL (colloquium talk)
- February Drexel University, Philadelphia, PA (Analysis seminar)
- March University of Seville, Spain (Analysis seminar)
University of Lisbon, Portugal (colloquium talk)
Autonomous University of Madrid, Spain (Analysis seminar)
- April Instituto Superior Tecnico, Lisbon, Portugal
(Seminar on Functional Analysis and Applications — two talks)
Barcelona Analysis Seminar, Spain
- May University of Algarve, Faro, Portugal
2nd Najman Conference on Spectral Problems for Operators and Matrices,
Dubrovnik, Croatia
Haifa Matrix Theory Conference, Israel
Complex Analysis & Dynamical Systems IV, Nahariya, Israel
Universite Pieree et Marie Curie – Paris 6 (Functional Analysis seminar)
- June University of Bordeaux, France
University of Marseille, France (Analysis seminar)
Meeting on Operators and Matrices, College of William & Mary, Williamsburg, VA
- October Functional Analysis Seminar, Oxford University, UK
London Analysis Seminar, University College London
- December Courant Institute seminar, NYU
- 2010
- January Cal Poly State University, San Luis Obispo (colloquium talk)
SUMO Speaker series, Stanford University
- June International Summer School and Workshop “Harmonic Analysis
and Related Topics”, Lisbon, Portugal
- July Instituto Superior Tecnico, Lisbon, Portugal
(Seminar on Functional Analysis and Applications)
International Workshop on Operator Theory and Applications,
Berlin, Germany (semi-plenary 45 min talk)
- October Workshop on Operator Theory, Complex Analysis and Applications

Lisbon, Portugal

November 1065th Meeting of the AMS, University of Richmond, VA
(invited special session talk)

2011

January University of California in Santa Cruz (colloquium talk)
IUPUI, Indianapolis, IN (colloquium talk)

March XXVII South Eastern Analysis Meeting, University of Florida, Gainesville

April International seminar “Modern methods and problems of Operator Theory,
Harmonic Analysis, and their Applications”, Rostov-on-Don, Russia
(invited lecture via video conference)

June University of Tennessee in Chattanooga (colloquium talk)
Summer School and Workshop on Selected Topics of Operator Theory
Lisbon, Portugal (course of three 90 minutes lectures)

July Integral and Differential Operators and Their Applications, Aveiro, Portugal
(plenary lecture)

September Research Experience for Undergraduate Faculty (REUF) workshop
American Institute of Mathematics, Palo Alto, CA (group leader)
International conference “Continuum Mechanics and related problems of Analysis”
Tbilisi, Georgia (plenary lecture)

December 2nd International Conference of the Georgian Mathematical Union, Batumi, Georgia
Workshop on “Stability, hyperbolicity, and zero localization of functions”
American Institute of Mathematics, Palo Alto, CA

2012

January University of Strathclyde, Glasgow, UK (colloquium talk)
Brunel University, London, UK (Applied Mathematics and Analysis seminar)

March Temple University, Philadelphia
(Applied Mathematics and Scientific Computing Seminar)

April NYU at Abu Dhabi, UAE (Science seminar)
Second International Scientific Conference on Contemporary Methods,
Problems and Applications of Operator Theory and Harmonic Analysis
Rostov-on-Don, Russia (invited lecture via video conference)

September Cornell University, Ithaca, NY (Analysis seminar)
Workshop on Operator Theory and Operator Algebras
Lisbon, Portugal (invited speaker)

October University of Connecticut (colloquium talk)

2013

January University of Reading, UK (Analysis seminar)
Brunel University, London, UK (colloquium talk)

March 29th Annual South-Eastern Analysis Meeting,

	Virginia Tech, Blacksburg, VA
	Louisiana State University, Baton Rouge, LA (colloquium talk)
May	Structured Quartet Research Ensembles program on “ Possible shapes of the numerical ranges for certain classes of matrices”, American Institute of Mathematics, Palo Alto, CA (group leader)
	Drexel University, Philadelphia, PA (Analysis seminar)
June	18th Conference of the International Linear Algebra Society (ILAS) Providence, RI (invited special session talk)
	New Directions for Mathematics REUs, Mount Holyoke College, MA
August	1st Mathematical Congress of the Americas, Guanajuato, Mexico (invited special session talk)
September	NYU at Abu Dhabi, UAE (Science seminar)
October	Istanbul Analysis Seminar, Turkey
	International conference on Groups, Group Rings and Related Topics UAE University, Al-Ain, United Arab Emirates
December	24th International Workshop on Operator Theory and Applications, Bangalore, India (invited special session talk)
2014	
February	NYUAD Research Conference, Abu Dhabi, United Arab Emirates
June	Universidad Autónoma de Madrid and Instituto de Ciencias Matemáticas Madrid, Spain (colloquium talk)
	Workshop on Operator Theory, Complex Analysis, and Applications Lisbon, Portugal
	Third Wiener-Hopf Workshop, University of Aveiro, Portugal
August	19th Conference of the International Linear Algebra Society (ILAS) Seoul, Korea (invited special session talk)
	ICM Satellite Conference on Operator Algebras and Applications Cheongpung, Korea
October	National Technical University of Athens, Greece (seminar talk)
November	Conference on Mathematics and its Applications (CMA 2014), Kuwait
December	Seminar on Matrix Analysis of the Center for Mathematical Modeling and Scientific Computing at the National Chiao Tung University Hsinchu, Taiwan
	Department of Applied Mathematics, National Sun Yat-sen University Kaohsiung, Taiwan
2015	
March	University of Jordan, Amman
April	The Second International Conference on Mathematics and Statistics (AUS-ICMS'15), American University of Sharjah, UAE
May	Functional Analysis Seminar, Institute of Analysis and Scientific Computing

Vienna University of Technology, Austria
 June Institute of Mathematics, Academy of Czech Republic, Prague
 Joint AMS-EMS-SPM International Meeting, Porto, Portugal
 (invited special session talk)
 July Humboldt Kolleg (invited talk), Georgian National Academy of Sciences
 26th International Workshop on Operator Theory and Applications
 Tbilisi, Georgia (invited 50 min and special session talks)
 Swedish-Georgian Conference on Analysis and Dynamical Systems
 Tbilisi, Georgia (invited talk)
 September University of Odessa, Ukraine
 October University of Malaga, Spain

2016

March University of Salerno, Italy (seminar talk)
 University of Bari Aldo Moro, Italy (seminar talk)
 May University of Ljubljana, Slovenia (seminar talk)
 June International conference on Complex Analysis and Related Topics,
 Lviv, Ukraine (plenary talk)
 Workshop on Operator Theory and Complex Analysis
 Coimbra, Portugal (invited talk)
 13th Workshop on “Numerical ranges and numerical radii”,
 Soochow University, Taipei, Taiwan
 July International Workshop on Operator Theory and Operator Algebras
 Lisbon, Portugal (plenary talk)
 27th International Workshop on Operator Theory and Applications
 Washington University in St. Louis (invited special session talk)
 October University of Crete, Greece (seminar talk)

2017

January Joint Mathematics Meeting of AMS and MAA, Atlanta, GA
 (invited special session talk)
 Portland State University, OR (Analysis seminar talk)
 March Vrije Universiteit Amsterdam, the Netherlands
 May Institute of Mathematics, Ukrainian Academy of Sciences, Kuiv
 (Functional Analysis Seminar)
 Kuiv Mathematical Society (colloquium talk)
 June Hilbert Function Spaces Conference (Gargnano, Italy)
 July Workshop on Operator Theory, Complex Analysis, and Applications
 Lisbon, Portugal
 August 28th International Workshop on Operator Theory and Applications
 Chemnitz Technical University, Germany (semi-plenary talk)
 September Armenian Mathematical Society, Yerevan (colloquium talk)

- October Workshop on Analysis and its Applications
 American University of Sharjah, UAE
 University of Catania, Italy (seminar talk)
- November International conference on Groups, Group Rings and Related Topics,
 Khorfakkan, Sharjah, UAE

Professional service

University Committee service

College (William & Mary) or Science Faculty (NYUAD) -wide:

Library Policy Advisory Committee, Arts and Sciences Library Committee (1993 – 1997), Transportation Advisory Committee (Spring 2000 – Fall 2002), Interity Panel (Fall 2017 – Present)

Departmental (William & Mary) or Program (NYUAD) -wide:

Graduate Studies Committee (1992–1993, 1996 – 2000), Library Representative (1993–1995, 1997 – 2002), Grants Opportunities Committee (Fall 1998 – 2000), Computer Committee (Fall 1999), Honors Committee (Fall 2007 – Spring 2008), Personnel Committee (Fall 1995, Fall 2000 – Spring 2002, Fall 2003 – Spring 2006, Fall 2007 – Spring 2008), Search Committee (Fall 2004 – Spring 2005, Fall 2007 – Spring 2008), Colloquium Committee (Fall 2003 – Spring 2008, Fall 2009 – Spring 2013), Merit Evaluation Committee (Fall 1998 – Spring 2000, Fall 2006 – Spring 2007, Fall 2009 – Spring 2012), Undergraduate Curriculum Committee (Fall 2012 – Spring 2013), Search Committee (Fall 2014 – Spring 2015), Curriculum Committee (Fall 2017 – Present)

Other professional service

Editor for the special issues of *Acta Appl. Math.* devoted to Antonio Avantaggiati (v. 65, nos. 1–3, 2001), *Complex Analysis and Operator Theory* dedicated to Georgii Semenovich Litvinchuk (v. 2, no. 2 and 4, 2008), *Linear Algebra and Applications* dedicated to Professor Friedland (v. 431, 2009) and to Professor Rodman (v. 470, 2015), as well as IWOTA 2008 Proceedings (v. 202 and 203, 2010), “Convolution Equations and Singular Integral Operators” (v. 206, 2010), “Operator Theory, Pseudo-Differential Equations, and Mathematical Physics” (v. 228, 2013), “Operator Theory, Operator Algebras, and Applications” (v. 242, 2014), and “Large truncated Toeplitz matrices, Toeplitz operators, and related topics” (v. 259, 2017) of the series *Operator Theory: Advances and Applications*.

Reviewer for *Mathematical Reviews* and *Zentralblatt* (about 180 reviews written)

Referee (at an average rate of about 30 papers per year) for journals in operator theory, integral equations, boundary value problems, matrix theory, control theory, among which: Proceedings of the National Academy of Sciences, Annals of Mathematics, Advances in Mathematics, Journal of the AMS, Transactions of the AMS, Proceedings of the AMS, Journal of the London Mathematical Society, Journal of the Australian Mathematical Society, Proceedings of the Royal Society of Edinburgh, Journal of Operator Theory, Journal of Functional Analysis and Applications, Journal of Mathematical Analysis and Applications, Journal of Inequalities and Applications, Journal of Physics A: Mathematical and Theoretical, Numerical Functional Analysis and Optimization, Michigan Mathematical Journal, Rocky Mountain J. Math., Linear Algebra and its Applications, Linear and Multilinear Algebra, Electronic Journal of Linear Algebra, SIAM J. Control and Optimization, Aequationes Mathematicae, Indagationes Mathematicae, Integral Equations and Operator Theory, Journal of Integral Equations and Applications, Indiana Journal of Mathematics, Complex Analysis and Operator Theory, Operators and Matrices, Operator Theory: Advances and Applications, Canadian Mathematical Bulletin, International Journal of Mathematics and Mathematical Sciences, St.Petersburg Math. J., Mathematische Nachrichten, Proceedings of the Armenian Academy of Sciences, Applied Mathematics and Computation, International Journal of Applied Mathematics and Computer Science, Automatica, CUBO, and others.

Conference organizer: Member of the Steering Committee, International Workshops on Operator Theory and its Applications (July 2008 – present)

Member of the Organizing Committee, Old Dominion Operator Theory and Analysis Conference (Williamsburg, VA, 1995).

Member of the NSF Operator Algebras/Operator Theory Panel (2000-2001).

Member of the Scientific Program Committee, International Conference “Factorization, singular operators and related problems” (Madeira, Portugal, January 2002)

Member of the Program Committee, International Workshop on Operator Theory and its Applications (Storrs, CT, July 2005)

Member of the Program Committee, International Workshop on Operator Theory and its Applications (Seoul, Korea, July–August 2006)

Member of the Scientific Program Committee, Summer School and a Workshop on Operator Algebras (Lisbon, Portugal, September 2006)

Special session organizer, Seventh Joint International Meeting of the AMS and the Sociedad Matematica Mexicana (Zacatecas, Mexico, May 2007)

Member of the Organizing Committee, The 19th International Workshop on Operator Theory and its Applications (Williamsburg, VA, 2008)

Special session organizer, The 20th International Workshop on Operator Theory and its Applications (Guanajuato, Mexico, September 2009)

Special session organizer, Eighth Joint International Meeting of the AMS and the Sociedad

Matemática Mexicana (Berkeley, CA, June 2010)

Member of the Organizing Committee, International Linear Algebra Society Conference (Pisa, Italy, June 2010)

Member of the Scientific Committee, Integral and Differential Operators and Their Applications (Aveiro, Portugal, July 2011)

Special session organizer, The 22nd International Workshop on Operator Theory and its Applications (Seville, Spain, July 2011)

Member of the Scientific Committee, International conference “Continuum Mechanics and related problems of Analysis” (Tbilisi, Georgia, September 2011)

Special session organizer, The 24th International Workshop on Operator Theory and its Applications (Bangalore, India, December 2013)

Member of the Scientific Committee, The Third Wiener-Hopf Workshop (Aveiro, Portugal, June 2014)

Member of the UAE Math Day 2015 Organizing and Scientific Committees

Special session organizer, AMS-EMS-SPM (American Mathematical Society, European Mathematical Society, and Sociedade Portuguesa de Matemática) International Meeting (Porto, Portugal, June 2015)

Special session organizer, The 26th International Workshop on Operator Theory and its Applications (Tbilisi, Georgia, July 2015)

Chair of the UAE Math Day 2016 Organizing and Scientific Committees

Mini-symposium organizer, Meeting of the International Linear Algebra Society (Iowa, July 2017)

Special session organizer, Joint Mathematics Meetings (San Diego, CA, January 2018)