

CURRICULUM VITAE

Raúl E. Curto

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Iowa City, Iowa 52242
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EDUCATION

Ph.D., SUNY at Stony Brook, 1978
M.A., SUNY at Stony Brook, 1978
Licenciante in Mathematics, Universidad Nacional de San Luis, Argentina, 1975
Teacher Certification in Secondary Education (Math), Univ. Nac. S. Luis, Arg., 1975

APPOINTMENTS

University of Iowa

Professor, Dept. of Mathematics, 8/87 - present
Associate Professor, Dept. of Mathematics, 8/83 - 8/87
Assistant Professor, Dept. of Mathematics, 8/81 - 8/83

Director of Diversity, College of Liberal Arts and Sciences, 1/04 -
Executive Associate Dean, College of Liberal Arts and Sciences, 7/98 - 6/14
Interim Dean, College of Liberal Arts and Sciences, 7/1/12 – 8/14/12
Associate Dean for Faculty, College of Liberal Arts, 6/96 - 6/98
Associate Chair and Director of Undergraduate Studies, Dept. of Math., 8/95 - 7/96
Director of Graduate Studies, Dept. of Mathematics, 8/92 - 7/95
Chair, Department of Spanish and Portuguese, 8/92 - 7/95
Associate Chair for Graduate Studies, Dept. of Mathematics, 8/90 - 7/92

Instructor of Mathematics, Univ. of Kansas, 8/79 - 8/81
Visiting Lecturer, Indiana Univ., Spring 1979
Teaching and Research Assistant, SUNY at Stony Brook, 1976 - 78
Teaching and Research Assistant, Univ. Nac. de S. Luis, Argentina, 1974 - 76

GRANTS, AWARDS AND MEMBERSHIPS

(PI) National Science Foundation Grant DMS-1302666, 8/13 - 7/16 (\$193,614)
(PI) National Science Foundation Grant DMS-1240475, 6/12-5/13 (\$21,600) (to support travel of young mathematicians to IWOTA 2012)
(PI) National Science Foundation Grant DMS-0902270, 5/09 - 4/12 (\$25,000) (to support travel of young mathematicians to IWOTA 2009)
(PI) National Science Foundation Grant DMS-0801168, 6/08 - 5/13 (\$152,599)
(co-PI) National Science Foundation VIGRE Grant DMS-0602242, 9/1/06 - 8/31/11 (\$3,000,000)

(co-PI) National Science Foundation Collaborative Research Grant (joint with Univ. of Central Florida): Conference Support for GPOTS 2005-06, DMS-0503990, 3/05 - 3/07 (UI amount: \$20,000)
 (PI) National Science Foundation Grant DMS-0400741, 6/04 - 5/08 (\$121,443)
 (PI) National Science Foundation Grant DMS-0422952, 7/04 - 6/05 (\$8,400) (to support travel of young mathematicians to IWOTA 2004)
 (PI) National Science Foundation Grant DMS-0099357, 6/01 - 5/04 (\$117,521)
 (PI) National Science Foundation Grant DMS-9800931, 6/98 - 5/01 (\$160,155)
 (PI) National Science Foundation Grant DMS-9401455, 6/94 - 5/98 (\$93,000)
 (PI) National Science Foundation Grant DMS-9102488, 6/91 - 5/94
 (co-PI) National Science Foundation Grant, 1988 (toward purchase of computer equipment)
 (PI) National Science Foundation Grant DMS-8802234, 6/88 - 5/91
 (PI) National Science Foundation Grant DMS-8502363, 6/85 - 5/88
 (PI) National Science Foundation Grant MCS82-00915, 6/82 - 5/85
 (AI) National Science Foundation Grant MCS79, 6/80 - 5/82

American Association for the Advancement of Science Fellow, 2010
 Regents Award for Faculty Excellent, Univ. of Iowa, 2004
 Collegiate Fellow, College of Liberal Arts and Sciences, Univ. of Iowa, 2002 - 17
 Ad-honorem member, CONICET (Argentine Research Council), 1988 - 94
 Faculty Scholar Award, Univ. of Iowa, 1988 - 91

Co-recipient, Univ. of Iowa Office of Affirmative Action Catalyst Award, October 2000
 Co-recipient, GAANN award to increase minority representation in the Department of Mathematics doctoral program, U.S. Dept. of Education, 1995 - 2000
 AMS Travel grant, ICM-94, Zürich, Switzerland
 AMS Travel grant, ICM-90, Kyoto, Japan

SUNY Research Fellowship, 1978
 Argentine Olympiad of Mathematics, Regional Champion, 1971

Member, Sociedad Matemática Argentina, 1992 -
 Member, Mathematical Association of America, 1989 -
 Member, American Association for the Advancement of Science, 1998 -
 Member, American Mathematical Society, 1977 -

PUBLICATIONS¹

Books and Research Monographs

- 2012 9. *** Recent Progress in Operator Theory and Its Applications, Proceedings of the International Workshop on Operator Theory and Applications (IWOTA), Guanajuato, Mexico, 2009, *Oper. Theory Adv. Appl.* 220 (2012); 342 pp. (co-edited with J.A. Ball, S.M. Grudsky, J.W. Helton, R. Quiroga-Barranco and N.L. Vasilevski).

¹ The following reference system has been used to label multi-authored works:

* = senior author, major contribution

** = secondary contribution

*** = equal contribution

**** = minor contribution

- 2011 8. *** Elementary Operators And Their Applications: 3rd International Workshop Held at Queen's University Belfast, April 14-17, 2009, *Oper. Theory Adv. Appl.* 212(2011); 153 pp. (co-edited with M. Mathieu).
- 2009 7. *** Recent Advances in Operator Theory and Applications, Proceedings of the International Workshop on Operator Theory and Applications (IWOTA), Seoul, Korea, 2006, *Oper. Theory Adv. Appl.* 187 (2009); 247 pp. (co-edited with T. Ando, I.B. Jung and W.Y. Lee).
- 2003 6. ** Operator Theory and Banach Algebras, *The Theta Foundation*, Bucharest, 2003 (co-edited with M. Chidami, M. Mbekhta, F.-H. Vasilescu and J. Zemánek).
- 2001 5. *** Joint hyponormality of Toeplitz pairs, *Memoirs Amer. Math. Soc.* 150, no. 712(2001), x+65 pages (with W.Y. Lee). (Featured MR 2002c:47042)
- 1998 4. *** Flat extensions of positive moment matrices: Recursively generated relations, *Memoirs Amer. Math. Soc.* 136, no. 648(1998), x+56 pp. (with L. Fialkow). (Featured MR 99d:47015)
- 1996 3. *** Solution of the truncated complex moment problem for flat data, *Memoirs Amer. Math. Soc.* 119, no. 568(1996), x+52 pp. (with L. Fialkow). (Featured MR 96g:47009)
- 1995 2. *** Multivariable Operator Theory, *Contemporary Math.* 185, Amer. Math. Soc., Providence, 1995 (co-edited with R.G. Douglas, J.D. Pincus and N. Salinas). (MR 96c:47001)
- 1994 1. *** Algebraic Methods in Operator Theory, *Birkhäuser-Verlag*, Boston, 1994 (co-edited with P. Jorgensen). (MR 95b:46001)

Articles Published (all refereed)

- 2013 102. *** Subnormality of 2-variable weighted shifts with diagonal core, *C.R. Acad. Sci. Paris, Ser. I* (2013), accepted for publication; 5 pp. in preprint form (with S.H. Lee and J. Yoon).
101. *** Recursively determined representing measures for bivariate truncated moment sequences, *J. Operator Th.*, accepted for publication; 33 pp. in preprint form (with L. Fialkow).
- 2012 100. *** Completion of Hankel partial contractions of extremal type, *J. Math. Phys.* 53, 123526(2012); 11 pp. (with S.H. Lee and J. Yoon).
99. *** Operators Cauchy dual to 2-hyperexpansive operators: The multivariable case, *Integral Equations Operator Theory* 73(2012), 481-516 (with S. Chavan).
98. *** Which subnormal Toeplitz operators are either normal or analytic?, *J. Funct. Anal.* 263(2012), 2333–2354 (with I.S. Hwang and W.Y. Lee).
97. *** Hyponormality and subnormality of block Toeplitz operators, *Adv. Math.* 230(2012), 2094-2151 (with I.S. Hwang and W.Y. Lee).

- 2011/2012 96. *** Subnormality for arbitrary powers of 2-variable weighted shifts whose restrictions to a large invariant subspace are tensor products, *J. Funct. Anal.* 262(2012), 569-583 (with S.H. Lee and J. Yoon); published online October 19, 2011.
- 2011 95. *** When is hyponormality for 2-variable weighted shifts invariant under powers?, *Indiana Univ. Math. J.* 60(2011), 997-1032 (with J. Yoon).
- 2010 94. *** A new approach to the 2-variable subnormal completion problem, *J. Math. Anal. Appl.* 370(2010), 270-283 (with S.H. Lee and J. Yoon).
93. *** Polynomially hyponormal operators, in *A Glimpse at Hilbert Space Operators: Paul R. Halmos in Memoriam*, *Oper. Theory Adv. Appl.* 207(2010), 195-207 (with M. Putinar).
- 2008 92. *** An analogue of the Riesz-Haviland Theorem for the truncated moment problem, *J. Funct. Anal.* 255(2008), 2709-2731 (with L.A. Fialkow).
91. *** Which 2-hyponormal 2-variable weighted shifts are subnormal?, *Linear Algebra Appl.* 429(2008), 2227-2238 (with S.H. Lee and J. Yoon).
90. *** The extremal truncated moment problem, *Integral Equations Operator Theory* 60(2008), 177-200 (with L. Fialkow and M. Möller); with Addendum in *Integral Equations Operator Theory* 61(2008), 147-148.
- 2007 89. *** Reconstruction of the Berger measure when the core is of tensor form, *Actas del XVI Coloquio Latinoamericano de Álgebra*, *Bibl. Rev. Mat. Iberoamericana* (2007), 317-331. (with S.H. Lee and J. Yoon).
88. *** Generalized Browder's and Weyl's theorems for Banach space operators, *J. Math. Anal. Appl.* 336(2007), 1424-1442 (with Y.M. Han).
87. *** Propagation phenomena for hyponormal 2-variable weighted shifts, *J. Operator Th.* 58 (2007), 175--203 (with J. Yoon).
86. *** Hyponormality and subnormality for powers of commuting pairs of subnormal operators, *J. Funct. Anal.* 245(2007), 390-412 (with S.H. Lee and J. Yoon).
- 2006 85. *** Spectral pictures of 2-variable weighted shifts, *C.R. Acad. Sci. Paris, Ser. I* 343(2006), 579-584 (with J. Yoon).
84. *** Disintegration-of-measure techniques for commuting multivariable weighted shifts, *Proc. London Math. Soc.* 92 (2006) 381-402 (with J. Yoon).
83. *** Jointly hyponormal pairs of subnormal operators need not be subnormal, *Trans. Amer. Math. Soc.* 358 (2006), 5139-5159 (with J. Yoon).
82. *** Quartically hyponormal weighted shifts need not be 3-hyponormal, *J. Math. Anal. Appl.* 314 (2006), 455--463 (with S.H. Lee).
- 2005 81. *** Subnormality of Bergman-like weighted shifts, *J. Math. Anal. Appl.* 308(2005), 334-342 (with Y.T. Poon and J. Yoon).

80. *** k -Hyponormality of multivariable weighted shifts, *J. Funct. Anal.* 229(2005), 462-480 (with S.H. Lee and J. Yoon).
79. *** Solution of the truncated hyperbolic moment problem, *Integral Equations Operator Theory* 52(2005), 181-218 (with L. Fialkow).
78. *** Truncated K -moment problems in several variables, *J. Operator Theory* 54(2005), 189-226. (with L. Fialkow).
77. *** k -hyponormality of finite rank perturbations of unilateral weighted shifts, *Trans. Amer. Math. Soc.* 357(2005), 4719-4737 (with W.Y. Lee).
76. *** A new criterion for k -hyponormality via weak subnormality, *Proc. Amer. Math. Soc.* 133(2005), 1805-1816 (with S.H. Lee and W.Y. Lee).
- 2004 75. *** Solution of the truncated parabolic moment problem, *Integral Equations Operator Theory* 50(2004), 169-196 (with L. Fialkow).
- 2003 74. *** Solution of the quadratically hyponormal completion problem, *Proc. Amer. Math. Soc.* 131(2003), 2479-2489 (with W.Y. Lee).
73. *** Weyl's theorem for algebraically paranormal operators, *Integral Equations Operator Theory* 47(2003), 307-314 (with Y.M. Han).
72. *** A characterization of k -hyponormality via weak subnormality, *J. Math. Anal. Appl.* 279(2003), 556-568 (with I.B. Jung and S.S. Park).
71. *** k -hyponormality of powers of weighted shifts via Schur products, *Proc. Amer. Math. Soc.* 131(2003), 2761-2769 (with S.S. Park).
70. *** Subnormality and k -hyponormality of Toeplitz operators: A brief survey and open questions, in *Operator Theory and Banach Algebras*, The Theta Foundation, Bucharest, 2003; pp. 73-81 (with W.Y. Lee).
69. *** Weyl's theorem, a -Weyl's theorem, and local spectral theory, *J. London Math. Soc.* (2) 67(2003), 499-509 (with Y.M. Han).
- 2002 68. *** A duality proof of Tchakaloff's Theorem, *J. Math. Anal. Appl.* 269(2002), 519-532 (with L. Fialkow). (MR 2003e:41047)
67. *** Subnormality and 2-hyponormality for Toeplitz operators, *Integral Equations Operator Theory* 44(2002), 138-148 (with S.H. Lee and W.Y. Lee). (MR 2003f:47045).
66. Taylor joint spectrum, *Encyclopaedia of Mathematics, Supplement III*, M. Hazewinkel (ed.), Kluwer Acad. Publ., 2002; pp. 399-401.
65. *** Weak subnormality of operators, *Arch. Math.* 79(2002), 360-371 (with I.S. Hwang and W.Y. Lee).
64. *** Triangular Toeplitz contractions and Cowen sets for analytic polynomials, *Proc. Amer. Math. Soc.* 130(2002), 3597-3604 (with M. Chō and W.Y. Lee). (MR 2003f:47044)

63. *** Towards a model theory for 2-hyponormal operators, *Integral Equations Operator Theory* 44(2002), 290-315 (with W.Y. Lee).
62. *** Solution of the singular quartic moment problem, *J. Operator Theory* 48(2002), 315-354 (with L. Fialkow). (MR 2003j:47017)
61. *** Extensions and extremality of recursively generated weighted shifts, *Proc. Amer. Math. Soc.* 130(2002), 565-576 (with I.B. Jung and W.Y. Lee). (MR 2002i:47041)
60. *** N-tuples of operators satisfying $\sigma_T(AB) = \sigma_T(BA)$, *Linear Algebra and Applications* 341(2002), 291-298 (with M. Chō and T. Huruya). (MR 2002k:47014)
- 2001 59. *** Reduced Cowen sets, *New York J. Math.* 7(2001), 217-222 (with W.Y. Lee). (MR 2002f:47059)
- 2000 58. *** Cartesian form of Putnam's inequality for doubly commuting n-tuples, *Indiana Univ. Math. J.* 49(2000), 1437-1448 (with M. Chō, T. Huruya and W. Zelazko). (MR 2002g:47040)
57. *** Quadratically hyponormal weighted shifts with two equal weights, *Integral Equations Operator Theory* 37(2000), 208-231 (with I.B. Jung). (MR 2001h:47046)
56. *** The quadratic moment problem for the unit disk and unit circle, *Integral Equations Operator Theory* 38(2000), 377-409 (with L. Fialkow). (MR 2002k:47036)
55. *** The truncated complex K-moment problem, *Transactions Amer. Math. Soc.* 352(2000), 2825-2855 (with L. Fialkow). (MR 2000j:47027)
- 1999 54. Truncated moment problems: existence, uniqueness, and localization of the support of representing measures. *The Second Meeting on Linear Algebra (Slovenian) (Bled, 1999)*. *Obzornik Mat. Fiz.* 46 (1999), no. 2, 45--50. (MR 2000c:47002)
- 1998 53. *** Flat extensions of positive moment matrices: Relations in analytic or conjugate terms, *Oper. Theory Adv. Appl.* 104(1998), 59-82 (with L. Fialkow). (MR 99i:47026)
- 1997 52. A joint spectral characterization of primeness for C*-algebras, *Proc. Amer. Math. Soc.* 125(1997), 3299-3301 (with C. Hernández G.). (MR 97m:46091)
51. An operator-theoretic approach to truncated moment problems, *Banach Center Publ.* 38(1997), 75-104. (MR 99c:47014)
- 1996 50. * Contractive completions of partial Hankel contractions, *J. Math. Anal. Appl.* 203(1996), 303-332 (with C. Hernández and E. de Oteyza). (MR 97i:47042)
- 1995 49. *** Standard operator models in the polydisc, II, *Indiana Univ. Math. J.* 44(1995), 727-746 (with F.-H. Vasilescu). (MR 96k:47009)
48. *** The spectral picture of Reinhardt measures, *J. Funct. Anal.* 131(1995), 279-301 (with K. Yan). (MR 96i:47006)

47. *** Spectrally bounded generalized inner derivations, *Proc. Amer. Math. Soc.* 123(1995), 2431-2434 (with M. Mathieu). (MR 95j:46055)
- 1994 46. * A matricial identity involving the self-commutator of a commuting n -tuple, *Proc. Amer. Math. Soc.* 121(1994), 461-464 (with R. Jian). (MR 94h:47063)
45. *** Recursively generated weighted shifts and the subnormal completion problem, II, *Integral Equations Operator Theory* 18(1994), 369-426 (with L. Fialkow). (MR 94m:47044)
- 1993 44. *** Automorphism invariance of the operator-valued Poisson transform, *Acta Scient. Math.*, (Szeged) 57(1993), 65-78 (with F.-H. Vasilescu). (MR 94i:47013)
43. *** Standard operator models in the polydisc, *Indiana Univ. Math. J.* 42(1993), 791-810 (with F.-H. Vasilescu). (MR 94k:47008)
42. *** Nearly subnormal operators and moment problems, *J. Funct. Anal.* 115(1993), 480-497 (with M. Putinar). (MR 95d:47024)
41. *** Recursively generated weighted shifts and the subnormal completion problem, *Integral Equations Operator Theory* 17(1993), 202-246 (with L. Fialkow). (MR 94h:47050)
- 1992 40. Spectral theory of elementary operators, *Proceedings of the Workshop on Elementary Operators and Applications*, M. Mathieu, ed., World Scientific, 1992; pp. 3-52. (MR 93i:47041)
- 1991 39. Polynomially hyponormal operators on Hilbert space, *Rev. Unión Mat. Arg.* 37(1991), 29-56. (MR 95a:47017)
38. *** Recursiveness, positivity, and truncated moment problems, *Houston J. Math.* 17(1991), 603-635 (with L. Fialkow). (MR 93a:47016)
37. *** Existence of non-subnormal polynomially hyponormal operators, *Bull. Amer. Math. Soc.* 25(1991), 373-378 (with M. Putinar). (MR 93e:47028)
36. Problems in multivariable operator theory, *Contemporary Math.* 120(1991), 15-17. (MR 92f:47001)
35. *** The Taylor spectrum of infinite direct sums, *Contemporary Math.* 120(1991), 19-27 (with K. Yan). (MR 92f:47004)
34. *** The C^* -algebra of an homogeneous ideal in two variables is type I, *Current Topics in Operator Algebras*, H. Araki, H. Choda, Y. Nakagami, K. Saitô and J. Tomiyama, editors, World Scientific, Singapore, 1991, 130-136, (with P. Muhly and K. Yan). (MR 93h:47055)
33. *** Spectral theory of Reinhardt measures, *Bulletin Amer. Math. Soc.*, 24(1991), 379-385 (with K. Yan). (MR 91i:47008)
32. Operator theory on Reinhardt domains, *Proc. Symposia Pure Math.*, 52(1991), Part 3, 93-101. (MR 92j:47052)

- 1990
31. Joint hyponormality: A bridge between hyponormality and subnormality, Proc. Symposia Pure Math. 51(1990), Part II, 69-91. (MR 91k:47049)
30. ** Random Toeplitz operators, Proc. Symposia Pure Math., 51(1990), Part I, 147-169 (with P.S. Muhly and J. Xia). (MR 92b:47033)
29. *** Operator factorizations and quasi-similarity orbits, Oper. Theory Adv. Appl. 43(1990), 151-164 (with L. Fialkow). (MR 92m:47040)
28. Quadratically hyponormal weighted shifts, Integral Equations Operator Theory 13(1990), 49-66. (MR 90k:47061)
27. *** Toeplitz operators on flows, Journal of Functional Analysis 93(1990), 391-450 (with P.S. Muhly and J. Xia). (MR 92b:47032)
- 1989
26. *** Similarity, quasisimilarity, and operator factorizations, Transactions Amer. Math. Soc. 314(1989), 225-254 (with L. Fialkow). (MR 92m:47040)
- 1988
25. *** Random Toeplitz and Hankel operators, Oper. Theory Adv. Appl. 35(1988), 377-384 (with P.S. Muhly and J. Xia). (MR 91c:47046)
24. *** Hyponormal pairs of commuting operators, Oper. Theory Adv. Appl. 35(1988), 1-22 (with P.S. Muhly and J. Xia). (MR 90m:47037)
23. * Browder spectral systems, Proc. Amer. Math. Soc. 103(1988), 407-413 (with A.T. Dash). (MR 89f:47004)
22. Applications of several complex variables to multi-parameter spectral theory, in *Surveys of Recent Results in Operator Theory*, Vol. II, J.B. Conway and B.B. Morrel, editors, Longman Publishing Co., London, 1988, 25-90. (MR 90d:47007)
- 1987
21. *** Elementary operators with H^∞ -symbols, Integral Equations Operator Theory 10(1987), 707-720 (with L. Fialkow). (MR 88j:47016)
20. *** The spectral picture of (L_A, R_B) , J. Funct. Anal. 71(1987), 371-392 (with L. Fialkow). (MR 88c:47006)
19. ** Ergodic H^1 is not a dual space, Hokkaido Univ. Math. J. 16(1987), 75-79 (with P.S. Muhly and T. Nakazi). (MR 88f:46084)
18. *** On superalgebras of the polydisc algebra, Acta Sc. Math. 51(1987), 413-421 (with P.S. Muhly, T. Nakazi and T. Yamamoto). (MR 89g:46089)
- 1986
17. Book Review: *Analytic Functional Calculus and Spectral Decompositions*, by F.-H. Vasilescu, Bulletin Amer. Math. Soc., 14(1986), 136-145.
16. *** Uniform algebras, Hankel operators and invariant subspaces, Oper. Theory Adv. Appl. 17(1986), 109-119 (with P.S. Muhly and T. Nakazi). (MR 89a:46113)
15. Connections between Harte and Taylor spectra, Revue Roumaine Math. Pures et Appl., 31(1986), 203-215. (MR 87h:47009)

- 1985
14. *** On closures of joint similarity orbits, *Integral Equations Operator Theory* 8(1985), 489-556 (with D. Herrero). (MR 87f:47019b)
 13. *** Wiener-Hopf operators and generalized analytic functions, *Integral Equations Operator Theory* (special issue on Index Theory and Wiener-Hopf Equations) 8(1985), 650-673 (with P.S. Muhly and J. Xia). (MR 87c:47036)
 12. *** Hankel operators and uniform algebras, *Archiv der Mathematik* 43(1985), 440-447 (with P.S. Muhly, T. Nakazi, and J. Xia). (MR 86c:47032)
 11. *** C*-algebras of multiplication operators on Bergman spaces, *J. of Funct. Anal.* 64(1985), 315-329 (with P.S. Muhly). (MR 86m:47044)
 10. *** Spectral properties of cyclic subnormal n-tuples, *Amer. J. Math.* 107(1985), 113-138 (with N. Salinas). (MR 86g:47024)
- 1984
9. ** Crossed products of strongly Morita equivalent C*-algebras, *Proc. Amer. Math. Soc.* 90(1984), 528-530 (with P.S. Muhly and D. Williams). (MR 85i:46083)
 8. *** Generalized Bergman kernels and the Cowen-Douglas theory, *Amer. J. Math.* 106(1984), 447-488 (with N. Salinas). (MR 85e:47042)
- 1983
7. *** A trace estimate for p-hyponormal operators, *Integral Equations Operator Theory* 6(1983), 507-514 (with P.S. Muhly and D. Xia). (MR 85b:47029)
 6. The spectra of elementary operators, *Indiana Univ. Math. J.* 32(1983), 193-197. (MR 84e:47005)
- 1982
5. Spectral permanence for joint spectra, *Trans. Amer. Math. Soc.* 270(1982), 659-665 (MR 83i:46061); (abstract) *Proceedings of Symposia in Pure Math.* 38(1982), Part 2, 623-624.
- 1981
4. Spectral inclusion for doubly commuting subnormal n-tuples, *Proceedings Amer. Math. Soc.* 83(1981), 730-734. (MR 82j:47030)
 3. Fredholm and invertible n-tuples of operators. The deformation problem, *Trans. Amer. Math. Soc.* 266(1981), 129-159. (MR 82g:47010)
- 1980
2. On the connectedness of invertible n-tuples, *Indiana Univ. Math. J.* 29, 3(1980), 393-406. (MR 81e:47035)
- 1978
1. Fredholm and invertible tuples of bounded linear operators, Ph.D. Dissertation, SUNY at Stony Brook, 1978.

Articles Submitted and Articles in Middle or Final Stages of Preparation

- 2013
10. *** A subnormal Toeplitz completion problem, submitted for publication; 19 pages in preprint form (with I.S. Hwang and W.Y. Lee).
 9. *** Abrahamse's theorem for matrix-valued symbols and subnormal Toeplitz completions, submitted for publication; 27 page in preprint form (with I.S. Hwang and W.Y. Lee).

8. *** Jointly hyponormal pairs with matrix-valued rational symbols, submitted for publication; 57 pages in preprint form (with I.S. Hwang and W.Y. Lee).
7. *** Subnormal and quasinormal Toeplitz operators with matrix-valued rational symbols, submitted for publication; 25 pages in preprint form (with I.S. Hwang, D.-O Kang and W.Y. Lee).
6. *** Cubic column relations in truncated moment problems, submitted for publication; 24 pp. in preprint form (with S. Yoo).
5. One-step extensions of subnormal 2-variable weighted shifts, in final steps of preparation; 10 pages in preprint form (with S.H. Lee and J. Yoon).
4. *** Berger measure for some transformations of subnormal weighted shifts, in final stages of preparation; 21 pages in preprint form (with G. Exner).
3. *** Hyponormality of Toeplitz operators on the Bergman space of the unit disk, in middle stages of preparation; 15 pp. in preprint form (with Z. Cuckovic).
2. *** A characterization of Taylor invertibility for commuting pairs of isometries, in final stages of preparation; 6 pp. in preprint form (with S.H. Lee).
1. *** Weyl's theorem for mixed shifts, in middle stages of preparation; 8 pp. in preprint form (with R. Harte and C. Hernández G.).

INVITED TALKS DELIVERED TO SPECIAL SESSIONS

- 2013**
98. Invited speaker, Special Session on Operator Algebras and Topological Dynamics, American Mathematical Society Sectional Meeting, Ames, Iowa, April 2013.
 97. Invited speaker, Special Session on Several Complex Variables and Multivariable Operator Theory, American Mathematical Society Annual Meeting, San Diego, California, January 2013.
 96. Invited speaker, Special Session on Several Complex Variables Techniques in Operator Theory, American Mathematical Society Annual Meeting, San Diego, California, January 2013.
- 2012**
95. Invited speaker, Special Session on Complex Analysis and Its Broader Impacts, American Mathematical Society Sectional Meeting, Akron, Ohio, October 2012.
- 2011**
94. Invited speaker, Special Session on Recent Progress in Operator Algebras, American Mathematical Society Sectional Meeting, Lincoln, Nebraska, October 2011.
 93. Invited speaker, Linear Algebra Workshop, Kranjska Gora, Slovenia, May/June 2011 (unable to attend).

92. Invited speaker, Special Session on Multivariable Operator Theory, American Mathematical Society Annual National Meeting, New Orleans, Louisiana, January 2011.
- 2010**
91. Invited speaker, Special Session on the Interplay between Operator Theory and the D-bar Neumann Problem, Twenty-First International Workshop on Operator Theory and Its Applications (IWOTA 2010), Berlin, July 2010.
90. Invited speaker, Special Session on Complex Analysis and operator Theory, Eight International Joint Meeting of the American Mathematical Society and the Sociedad Matemática Mexicana, Berkeley, California, June 2010.
- 2009**
89. Invited speaker, Special Session on Analysis, III Latin American Congress of Mathematicians, Santiago, Chile, August/September 2009.
88. Plenary speaker, Great Plains Operator Theory Symposium, University of Colorado, Boulder, June 2009.
87. Invited speaker, Third International Workshop on Elementary Operators and Their Applications, Queen's University, Belfast, Northern Ireland, April 2009.
86. Invited speaker, Special Session on Concrete Aspects of Real Positive Polynomials, American Mathematical Society Sectional Meeting, Urbana, Illinois, March 2009.
- 2008**
85. Invited speaker, Special Concentration Week in Multivariate Operator Theory, Texas A&M University, July/August 2008.
84. Invited speaker, Special Session on (Non)-commutative multivariable operator theory, Nineteenth International Workshop on Operator Theory and Its Applications (IWOTA 2008), College of William and Mary, Williamsburg, Virginia, July 2008.
83. Invited speaker, Special Session on Interpolation, Nineteenth International Workshop on Operator Theory and Its Applications (IWOTA 2008), College of William and Mary, Williamsburg, Virginia, July 2008.
82. Invited speaker, Special Session on Real Algebra and Its Interactions with Functional Analysis, Linear Algebra Workshop, Kranjska Gora, Slovenia, May/June 2008.
81. Invited speaker, Operator Theory and Operator Algebras in Cork: A Conference in Memory of Gerard J. Murphy, University College, Cork, Ireland, May 2008.
- 2007**
80. Invited speaker, Special Session on Complex Analysis and Operator Theory, First Joint International Meeting Between the American Mathematical Society and the Polish Mathematical Society, Warsaw, July/August 2007 (unable to attend).
79. Invited speaker, Special Session on Advances in Spectral Theory of Operators, American Mathematical Society Sectional Meeting, Tucson, Arizona, April 2007.

- 2006**
- 78. Invited speaker, Special Session on Recent Results on Operator Algebras, American Mathematical Society Sectional Meeting, Cincinnati, Ohio, October 2006.
 - 77. Invited speaker, Workshop on Positive Polynomials and Optimization, Banff International Research Station for Mathematical Innovation and Discovery (BIRS), Banff, Alberta, Canada, October 2006.
 - 76. International Advisor of the Organizing Committee, Seventeenth International Workshop on Operator Theory and Applications, Seoul National University, Korea, July 2006.
 - 75. Invited speaker, Second Small Workshop on Operator Theory, Krakow, Poland, June 2006 (unable to attend).
 - 74. Extremal moment problems, Southeastern Analysis Meeting XXII, University of Florida, Gainesville, March 2006.
- 2005**
- 73. Special Session on Recent Progress in Operator Algebras, American Mathematical Society Sectional Meeting, Lincoln, Nebraska, October 2005.
 - 72. Special Session on Operator Algebras, XVI Coloquio Latinoamericano de Álgebra, Colonia del Sacramento, Uruguay, August 2005.
 - 71. Truncated moment problems: The extremal case, Great Plains Operator Theory Symposium, University of Central Florida, Orlando, Florida, June 2005.
 - 70. International Conference on Positive Polynomials, Centre International de Rencontres Mathématiques, Luminy, France, March 2005.
- 2004**
- 69. Member, Scientific Committee, International Workshop on Operator Theory and Applications, University of Newcastle upon Tyne, July 2004.
 - 68. Jointly hyponormal pairs of commuting subnormal operators need not be jointly subnormal, Great Plains Operator Theory Symposium, Texas A&M University, May 2004.
 - 67. Jointly hyponormal pairs of commuting subnormal operators need not be jointly subnormal, Southeastern Analysis Meeting XX, University of Alabama, Tuscaloosa, March 2004.
- 2003**
- 66. Special Session on Operator Theory and Spaces of Analytic Functions, First Joint Meeting of Amer. Math. Soc. and Royal Soc. Mat. Esp., Seville, Spain, June 2003 (unable to attend).
 - 65. k -hyponormality of powers of weighted shifts via Schur products, Great Plains Operator Theory Symposium, University of Illinois, May 2003.

- 2002** 64. Algebraic varieties arising in truncated complex moment problems, Special Session on Multivariable Operator Theory and Related Topics, International Workshop on Operator Theory and its Applications, Blacksburg, Virginia, August 2002.
63. Truncated moment problems supported on conics, Canadian Operator Symposium, Thunder Bay, Ontario, Canada, May 2002.
- 2001** 62. Special Session on Operator Theory and Systems, Fifth SIAM Conference on Control and its Applications, San Diego, July 2001.
61. Special Session on Functional Analysis, Fifth International Joint Meeting of the Amer. Math. Soc. and the Soc. Mat. Mexicana, Morelia, Mexico, May 2001 (unable to attend).
60. Nebraska-Iowa Functional Analysis Seminar, University of Nebraska at Lincoln, April 2001.
59. Special Session on Quantization and Operator Algebras, Amer. Math. Soc. Sectional Meeting, University of Kansas, Lawrence, March 2001.
- 2000** 58. Triangular Toeplitz contractions and Cowen sets for analytic polynomials, Special Session on Banach Algebras, Amer. Math. Soc. Sectional Meeting, San Francisco State University, October 2000.
57. Solution of the singular quartic moment problem, Great Plains Operator Theory Symposium, San Juan, Puerto Rico, May 2000.
- 1999** 56. Solution of the singular quartic moment problem, Special Session on Operator Theory, Including Applications in Operator Algebras and Wavelets, Amer. Math. Soc. Sectional Meeting, University of North Carolina at Charlotte, October 1999.
55. Towards a model theory for 2-hyponormal operators, Great Plains Operator Theory Symposium, Iowa State University, Ames, Iowa, May 1999.
54. Truncated moment problems for the unit disk and unit circle, Southeastern Analysis Meeting, Vanderbilt University, Nashville, Tennessee, May 1999.
53. Existence of a rich collection of positively quadratically hyponormal weighted shifts, Special session on Linear Operator Theory, Amer. Math. Soc. Sectional Meeting, University of Florida, Gainesville, March 1999.
- 1998** 52. Hyponormal pairs of Toeplitz operators, Special Session on Operator Theory and Holomorphic Spaces, Amer. Math. Soc. Sectional Meeting, Wake Forest Univ., October 1998.
51. Hyponormal pairs of Toeplitz operators, Great Plains Operator Theory Symposium, Kansas State University, Manhattan, May 1998.
50. Hyponormal pairs of Toeplitz operators, Southeastern Analysis Meeting, University of Alabama, Tuscaloosa, February 1998.

- 1997 49. The truncated K -moment problem for the unit disk and unit circle, Special Session on Operator Theory and Function Spaces, Amer. Math. Soc. Sectional Meeting, Milwaukee, Wisconsin, October 1997.
48. The truncated K -moment problem, Great Plains Operator Theory Symposium/ Canadian Operator Symposium, Kingston, Ontario, Canada, May 1997.
- 1996 47. A joint spectral characterization of primeness for C^* -algebras, Wabash Extramural Miniconference on Functional Analysis, Indianapolis, Indiana, October 1996.
46. Standard operator models in several variables, Southeastern Analysis Meeting XII, Richmond, Virginia, March 1996.
- 1995 45. Standard operator models on the polydisc, Second Joint Meeting of the Amer. Math. Soc. and the Soc. Mat. Mexicana, Guanajuato, Mexico, November/ December 1995.
44. The truncated complex moment problem: A status report, Great Plains Operator Theory Symposium, Cincinnati, Ohio, May 1995.
- 1994 43. Contractive completions of partial Hankel contractions, Special Session on Interpolation and Dilation Theory, Amer. Math. Soc. Regional Meeting, Richmond, Virginia, November 1994.
42. Truncated moment problems for measures with support in \mathbf{C} , International Conference on The Interaction Between Functional Analysis, Harmonic Analysis, and Probability, Columbia, Missouri, May/June 1994.
41. Solution of the truncated complex moment problem with flat data, II, Great Plains Operator Theory Symposium, Lincoln, Nebraska, May 1994.
40. A matricial approach to the truncated complex moment problem, Special Session on Operator Theory, American Mathematical Society Regional Meeting, Manhattan, Kansas, March 1994.
39. Standard operator models in several variables, International Conference on Harmonic Analysis and Operator Theory, Caracas, Venezuela, January 1994.
- 1993 38. Spectrally bounded generalized inner derivations, Special Session on Nonselfadjoint Operator Algebras, American Mathematical Society Regional Meeting, College Station, Texas, October 1993.
37. Polynomial hyponormality on Hilbert space, Journées de Théorie des opérateurs, Luminy, France, April 1993.
36. A matricial identity for the self-commutator of a commuting n -tuple, Southeastern Analysis Meeting, Memphis, Tennessee, March 1993.
35. Automorphism invariance of the operator-valued Poisson transform, Special Session on Holomorphic Function Spaces, Annual Meeting of the Amer. Math. Soc., San Antonio, Texas, January 1993.
- 1992 34. Automorphism invariance of the operator-valued Poisson transform, Special Session on Operator Algebras and Operator Theory, Amer. Math. Soc. Regional Meeting, Dayton, Ohio, October 1992.

- 1991**
- 33. Spectral properties of essentially normal Bergman pairs, Special Session on Multidimensional Complex Analysis and Operator Theory, Amer. Math. Soc. Regional Meeting, Fargo, North Dakota, October 1991.
 - 32. Nearly subnormal operators and moment problems, Canadian Operator Theory Seminar, Montréal, May 1991 (50 minute talk; unable to attend).
 - 31. Existence of nontrivial polynomially hyponormal operators, Great Plains Operator Theory Symposium, College Station, Texas, May 1991.
 - 30. Existence of non-subnormal polynomially hyponormal operators, Wabash Miniconference on Functional Analysis, Indianapolis, April 1991.
 - 29. Existence of non-subnormal polynomially hyponormal operators, Southeastern Analysis Meeting VII, Charlotte, North Carolina, April 1991.
 - 28. Multiplication operators on functional Hilbert spaces over Reinhardt domains, Special Session on Functional Hilbert Spaces, Amer. Math. Soc. Regional Meeting, South Bend, Indiana, March 1991.
- 1990**
- 27. A Hankel matrix approach to truncated moment problems, Special Session on Operator Theory and Operator Algebras, AMS Regional Meeting, Irvine, California, November 1990.
 - 26. Multiplication operators over Reinhardt domains in two complex variables, International Symposium in Functional Analysis and Related Topics, Sapporo, Japan, September 1990.
 - 25. C^* -algebras of homogeneous ideals in two variables, International Conf. on Current Topics in Operator Algebras, Nara, Japan, August 1990.
 - 24. Joint spectra of infinite direct sums, CBMS Regional Conf. on Triangular Operator Algebras, Fort Worth, Texas, May 1990.
 - 23. Recursively generated weighted shifts, Great Plains Operator Theory Seminar, Albuquerque, New Mexico, April 1990.
- 1989**
- 22. Operator theory on Reinhardt domains, AMS Summer Research Institute on Several Complex Variables and Complex Geometry, Santa Cruz, California, July 1989.
 - 21. Hyponormality for rank-one perturbations of the Bergman shift, Great Plains Operator Theory Seminar, Houston, Texas, May 1989.
- 1988**
- 20. Joint Hyponormality: A bridge between hyponormality and subnormality, Amer. Math. Soc. Summer Research Institute on Op. Theory, Op. Algebras and Applications, Durham, New Hampshire, July 1988 (90-minute talk).
 - 19. Operator factorizations and quasi-similarity orbits, 12th International Operator Theory Conference, Timișoara, Romania, June 1988 (one-hour talk).
 - 18. Quadratically hyponormal weighted shifts, Great Plains Operator Theory Seminar, Indianapolis, Indiana, May 1988.

17. Joint hyponormality for commuting n -tuples of Hilbert space operators, S.A.A.R. Conference, Saarbrücken, West Germany, June 1988 (one-hour talk).
16. Hyponormality in several variables, Second Annual Northeastern Analysis Meeting, New Paltz, New York, April 1988 (one-hour talk).
- 1987
 15. A factorization approach to quasisimilarity, Special Session on Operator Algebras and Operator Theory, Lincoln, Nebraska, October 1987.
 14. Hyponormal pairs of commuting operators, Conference on Functional Analysis and Operator Theory, Phoenix, Arizona, June 1987.
 13. Hyponormal pairs of commuting operators, Great Plains Operator Theory Seminar, Lawrence, Kansas, May 1987.
 12. Factorizations in the commutant and quasisimilarity, Third Annual Southeastern Analysis Meeting, Tuscaloosa, Alabama, March 1987.
- 1986
 11. Toeplitz operators on flows, Great Plains Operator Theory Seminar, Cincinnati, Ohio, May 1986.
 10. Operator theory and several complex variables, Special Session on Operator Theory and Complex Variables, 92nd Annual Meeting of the Amer. Math. Soc., New Orleans, January 1986.
- 1985
 9. Remarks on multiparameter spectral theory, Iowa-Iowa State Miniconference, Grinnell, October 1985.
 8. The Taylor spectrum of left and right multiplications, Great Plains Operator Theory Seminar, Texas A&M Univ., College Station, Texas, May 1985.
 7. Joint similarity orbits, Wabash Extramural Conference in Modern Analysis, Indianapolis, March 1985.
- 1984
 6. Uniform algebras, Hankel operators and invariant subspaces, IX Operator Theory Conference, Timisoara-Herculane, June 1984.
 5. Harte spectrum vs. Taylor spectrum for commuting pairs of operators, CBMS Regional Conference on Invariant Subspaces, Dilation Theory, and the Structure of the Predual of a Dual Operator Algebra, Tempe, Arizona, May 1984.
 4. A Rota model for the Taylor spectrum and similarity orbits in several variables, Great Plains Operator Theory Seminar, Iowa State University, Ames, May 1984.
- 1983
 3. Groupoid C^* -algebras of operators on Bergman spaces, Special Session on Operator Algebras and Operator Theory, 89th Annual Meeting of the Amer. Math. Soc., Denver, January 1983 (with P. Muhly).
- 1982
 2. Generalized Bergman kernels and the Cowen-Douglas theory, Special Session on Operator Theory, 88th Annual Meeting of the Amer. Math. Soc., Cincinnati, 1982 (with N. Salinas).
- 1980
 1. Spectral permanence for joint spectra, 28th Summer Research Institute on Operator Algebras and Applications, Queen's University, Kingston, Ontario, 1980.

SPECIAL INVITATIONS

- 2014** 70. Invited Speaker, International Workshop on Operators, Queen's University, Belfast, September 2014.
69. Plenary Speaker, ICM Satellite Conference on Operator Algebras and Applications, Cheongpung, Korea, August 2014.
68. Invited Speaker, Hilbert Modules and Complex Geometry, Mathematisches Forschungsinstitut Oberwolfach, Germany, April 2014.
- 2013** 67. Plenary Speaker, Twenty-fourth International Workshop on Operator Theory and Applications, Bangalore, India, December 2013.
66. Invited Speaker, Program on Inverse Moment Problems, Institute for Mathematical Sciences, National University of Singapore, December 2013.
65. Invited Speaker, International Conference on Operator Theory and Operator Algebras in Honor of the 75th Birthday of Ron Douglas, Fudan University, Shanghai, China, July 2013.
- 2012** 64. Plenary Speaker, Twenty-third International Workshop on Operator Theory and Applications, Sydney, Australia, July 2012.
63. Main speaker, KOTAC International Conference: Operator Theory and Its Applications, Chunbuk University, Cheongju, Korea, June 2012.
- 2011** 62. Main speaker, Research Institute for Mathematical Sciences, Workshop on *Structural study of operators via spectra or numerical ranges*, Kyoto, Japan, November 2011.
61. Plenary Speaker, Twenty-second International Workshop on Operator Theory and Applications, Seville, Spain, July 2011.
60. Main speaker, KOTAC International Conference: Operator Theory and Its Applications, Daejeon, Korea, June 2011 (unable to attend).
- 2010** 59. Invited speaker, Control, Optimization and Functional Analysis: Synergies and Perspectives, San Diego, California, October 2010.
58. Semi-plenary speaker, Twenty-first International Workshop on Operator Theory and Applications, Berlin, Germany, July 2010.
57. Plenary Speaker, Recent Advances in Function Related Operator Theory, Rincón, Puerto Rico, March 2010.
- 2009** 56. Plenary Speaker, Twentieth International Workshop on Operator Theory and Applications, Guanajuato, Mexico, September 2009.
55. Main speaker, KOTAC International Conference: Operator Theory and Its Applications, Taegu City, Korea, June 2009.

- 2007** 54. Co-organizer, Special Session on Operator Theory and Complex Analysis, Seventh International Joint Meeting of the AMS and SMM, Zacatecas, Mexico, May 2007 (unable to attend).
- 2006** 53. Distinguished Visiting Professor, Bucknell University, November 6 – 11, 2006.
52. Main speaker, Wabash Modern Analysis Miniconference, Indianapolis, Indiana, September 2006.
51. Plenary Speaker, Seventeenth International Workshop on Operator Theory and Applications, Seoul National University, Korea, July/August 2006.
50. Distinguished Visiting Professor, Université de Lille, June 2006.
- 2005** 49. Keynote Speaker, International Operator Theory Conference, Taegu, Korea, June 2005.
48. Main speaker, Southeastern Analysis Meeting XXI, Lexington, Virginia, April 2005.
- 2004** 47. Keynote Speaker, International Operator Theory Conference, Seoul National University, Korea, June 2004 (unable to attend).
- 2003** 46. Keynote speaker, Belfast Functional Analysis Symposium, November 2003.
- 2002** 45. Main speaker, Spaces of Analytic Functions and Their Operators, Centre International de Rencontres Mathématiques, Marseille, France, September-October, 2002 (unable to attend).
44. Main speaker, Great Plains Operator Theory Symposium, Charlotte, North Carolina, May 2002.
43. Invited speaker, *Positivität von Polynomen*, Mathematisches Forschungsinstitut Oberwolfach, Germany, February 2002.
- 2001** 42. Main speaker, Wabash Modern Analysis Miniconference, Bloomington, Indiana, September 2001.
41. Keynote Speaker, International Operator Theory Conference, Cheju Island, Korea, June 2001.
- 2000** 40. Distinguished Visitor Lecture Series, Special Summer School on Truncated Moment Problems, Safi, Morocco, July 2000.
39. Distinguished Visitor Lecture Series, Bucknell University, April 2000.
38. Main speaker, Troisièmes Journées Lilloises de Théorie des Opérateurs, Lille, France, January 2000: “Towards a model theory for 2-hyponormal operators.”
- 1999** 37. Main speaker, International Conference on Operator Theory, Okayama, Japan, November 1999.
36. Main speaker, International Conference in Honor of Bela Sz. Nagy, Szeged, Hungary, August 2-6, 1999 (unable to attend).

35. Main speaker, Young Analysts of the Middle Southeast NSF Conference, Furman University, South Carolina, July 1999.
34. Main speaker and research group director, Linear Algebra Workshop, Bled, Slovenia, June 1-10, 1999 (unable to attend; abstract of research group proposal published in *Obzornik mat. fiz.* 46(1999), 45-50).
33. Member of International Scientific Committee and main speaker, Théorie des opérateurs et algèbres de Banach, Le Congrès International de Mathématiques de Rabat (as part of the Anné Mondiale des Mathématiques), Rabat, Morocco, April 12-14, 1999.
- 1998**
32. Distinguished Visitor Lecture Series, Sun Kyun Kwan University and Kyungpook University, Korea, July 1998 (series of four 60-minute lectures).
31. Main speaker, Canadian Operator Algebra Seminar, Edmonton, Alberta, May 1998.
- 1997**
30. Co-organizer, Special Session on Complex Analysis and Functional Analysis, Third Joint Meeting of the AMS and SMM, Oaxaca, Mexico, December 1997.
29. Distinguished Visiting Professor, Université de Lille, May/June 1997.
28. Invited speaker, Deuxièmes Journées Lilloises de Théorie des Opérateurs, Lille, France, March 1997: "Truncated moment problems for the unit disk and unit circle."
- 1996**
27. Invited speaker, 20th International Operator Theory Conference, Timisoara, Romania, July 1996 (unable to attend).
26. Main speaker, Great Plains Operator Theory Symposium, Tempe, Arizona, May 1996: "Truncated complex moment problems: An update."
25. Main speaker, Canadian Operator Seminar, Saskatoon, Canada, May 1996: "Standard operator models in several variables."
24. Co-organizer, Special Session on Moments and Operators, Amer. Math. Soc. Central Sectional Meeting, Iowa City, Iowa, March 1996 (with P. Jørgensen and P. Muhly).
- 1995**
23. Keynote speaker, Deuxièmes Journées de Théorie des Opérateurs, Luminy, France, October/November 1995.
22. Main speaker, Wabash Extramural Analysis Meeting, Indianapolis, September 1995.
21. Main speaker, XI Southeastern Analysis Meeting, Atlanta, March 1995.
- 1994**
20. Invited speaker, Special Session on Functional Analysis, Annual Meeting of the Mexican Math. Soc., Querétaro, Mexico, October 1994.
19. Main speaker, Special Semester on Linear Operators, Banach Research Center, Warsaw, Poland, April 1994.
18. Main lecturer, Minicourse on Toeplitz Operators on the Hardy Space, M. Cotlar Conference, Caracas, Venezuela, January 1994.

17. Member, International Organizing Committee of the 1994 M. Cotlar Conference, Caracas, Venezuela, January 1994.
- 1993**
 16. Main speaker, IV Simposio Chileno de Matemática, Santiago, Chile, September 1993.
 15. Co-chair, AMS Summer Research Conference on Multivariable Operator Theory, Seattle, Washington, July 10-18, 1993.
 14. Main speaker, Great Plains Operator Theory Symposium, Boulder, Colorado, June 1993.
 13. Co-organizer, Special Session on Operator Theory and Triangular Operator Algebras, 99th Annual Meeting of the Amer. Math. Soc., San Antonio, Texas, January 1993.
- 1992**
 12. Distinguished Visitor Lecture Series, Univ. Autónoma, Mexico City, June 1992.
 11. Escuela Venezolana de Matemática, main speaker (series of ten one-hour lectures), Univ. de Los Andes, Mérida, Venezuela, September 1992.
- 1991**
 10. Escuela Latinoamericana de Matemática, main speaker (series of seven one-hour lectures), Instituto Argentino de Matemática, Córdoba, Argentina, August 1991.
 9. International Workshop on Elementary Operators and Applications, main speaker (two 75-minute lectures), H. Fabri Institut, Blaubeuren, Germany, June 1991.
- 1990**
 8. Teoría de momentos de probabilidad para traslaciones unilaterales en espacios de Hilbert, Distinguished Visitor Lecture Series, Univ. de Los Andes, Mérida, Venezuela, October 1990.
 7. Co-organizer, Special Session on Multivariable Operator Theory, 96th Annual Meeting of the American Mathematical Society, Louisville, January 1990.
- 1989**
 6. Joint Hyponormality and Browder spectral systems, Special Lectures in Analysis, University of North Carolina, Chapel Hill, April 1989. (Series of three one-hour talks.)
- 1988**
 5. Distinguished Visiting Lecturer, LAMAIN (Winter Math. Laboratory), Mendoza, Argentina, August 1988: Teoría espectral en varias variables.
- 1985**
 4. Applications of several complex variables to multi-parameter spectral theory (series of three one-hour lectures), Function Theoretic Operator Theory Conference, Bloomington, Indiana, November 1985.
 3. Nociones básicas sobre espectros conjuntos de operadores (minicourse), I.A.M., Buenos Aires, 1985.
 2. Elementos de teoría espectral en varias variables, Distinguished Visitor Lecture Series in Mathematics, Univ. Nac. San Luis, Argentina, 1985.
- 1983**
 1. Distinguished Visitor Lecture Series, Univ. Nac. San Juan, Arg., July 1983: Espacios de Banach y operadores acotados en espacios de Hilbert.

COLLOQUIA

- 2010** 53. Cubic column relations in truncated moment problems, University at Albany, Albany, New York, October 2010.
52. Cubic column relations in truncated moment problems, University of Nebraska, Lincoln, April 2010.
51. Spectral and structural properties of hyponormal 2-variable weighted shifts, University of Nebraska, Lincoln, April 2010 (seminar talk).
50. Cubic column relations in truncated moment problems, University of Toledo, February 2010.
49. Spectral pictures of 2-variable weighted shifts, University of Toledo, February 2010 (seminar talk).
- 2009** 48. Truncated moment problems: The extremal case, University of Texas at San Antonio, February 2009.
- 2005** 47. The lifting problem for hyponormal pairs of commuting subnormal operators, University of Toronto, May 2005.
- 2003** 46. Solution of the Quadratically Hyponormal Completion Problem, Iowa State University, November 2003.
- 2002** 45. Truncated Moment Problems: A Survey of Recent Results, Vanderbilt University, April 2002.
- 2001** 44. A duality proof of Tchakaloff's Theorem, Kyungpook National Univ., Taegu City, Korea, May 2001; SungKyunKwan Univ., Seoul, Korea, June 2001.
- 1998** 42. Subnormality, polynomial hyponormality and quadratic hyponormality for unilateral weighted shifts, Pukyong National University, Pusan, Korea, July 1998.
43. Operator-theoretic methods for truncated moment problems, Cheju National University, Cheju, Korea, July 1998.
- 1995** 41. Contractive completions of Hankel partial contractions, SUNY at New Paltz, New York, March 1995.
40. *Mathematica* as a theorem-prover, Univ. of Texas at San Antonio, February 1995.
39. Contractive completions of Hankel partial contractions, Univ. of Texas at San Antonio, February 1995.
- 1993** 38. Métodos computacionales en la teoría de momentos, Univ. Nac. de Cuyo, Mendoza, Argentina, December 1993.
37. Standard operator models in the unit ball and unit polydisc, Washington University, St. Louis, November 1993 (seminar talk).
36. Multiplication operators on functional Hilbert spaces in several variables, Washington University, St. Louis, November 1993.

- 1992**
- 35. Polynomial hyponormality on Hilbert space, Memphis State University, April 1992.
 - 34. Spectral properties of elementary operators, with applications, Texas A & M University, February 1992 (seminar talk).
 - 33. Multiplication operators on functional Hilbert spaces over Reinhardt domains, Texas A & M University, February 1992.
- 1991**
- 32. Técnicas de espacios de Hilbert en el estudio de problemas de momentos, Univ. Católica, Santiago, Chile, December 1991.
 - 31. Manipulación simbólica aplicada a la teoría de operadores, Univ. Nac. Córdoba, Argentina, September 1991.
 - 30. Multivariable spectral theory: Axiomatic approach, tensor products, Reinhardt measures, and Browder systems, Universität Kiel, Germany, June 1991.
 - 29. Polynomially hyponormal operators on Hilbert space, Universität Münster, Germany, June 1991.
 - 28. Polynomially hyponormal operators on Hilbert space, Universität des Saarlandes, Saarbrücken, Germany, June 1991.
 - 27. Multiplication operators on functional Hilbert spaces over Reinhardt domains, Universität Tübingen, Germany, June 1991.
 - 26. Polynomially hyponormal operators, Central Michigan University, Mt. Pleasant, April 1991 (seminar talk).
 - 25. Uses of MACSYMA in the study of polynomial hyponormality for Hilbert space operators, Central Michigan University, Mt. Pleasant, April 1991.
- 1990**
- 24. Operator theory on Reinhardt domains in two complex variables, University of Waterloo, Ontario, Canada, November 1990. (Seminar talk)
 - 23. Polynomial hyponormality for Hilbert space operators, Univ. of Waterloo, Ontario, Canada, November 1990.
 - 22. A survey of joint spectra, Niigata Univ., Niigata, Japan, August 1990.
 - 21. Joint hyponormality for Hilbert space operators, Joetsu Univ. of Education, Joetsu, Japan, August 1990.
- 1989**
- 20. Joint hyponormality and subnormal completions of unilateral weighted shifts, Virginia Technological Institute and State University, Blacksburg, December 1989.
 - 19. Operator theory on Reinhardt domains in two variables, Virginia Technological Institute and State University, Blacksburg, December 1989. (Seminar talk)
 - 18. Hyponormality for perturbations of the Bergman shift, University of North Carolina at Charlotte, April 1989.
 - 17. Hyponormality for perturbations of the Bergman shift, Vanderbilt University, Nashville, Tennessee, March 1989.

- 1988 16. Functional representations of spectral systems, SUNY at Stony Brook, April 1988 (one-hour seminar talk).
15. Quasi-similarity via operator factorizations, Indiana University, Bloomington, March 1988 (one-hour seminar talk).
14. Hyponormality for commuting operators, Indiana University, Bloomington, March 1988 (one-hour seminar talk).
- 1985 13. Análisis funcional: conceptos básicos y aplicaciones, Mendoza, Arg., June 1985.
- 1984 12. A survey of multiparameter spectral theory, SUNY at New Paltz, New Paltz, August 1984.
11. Connections between Harte and Taylor spectra, Univ. des Saarlandes, Saarbrücken, W. Germany, June 1984.
- 1983 10. Núcleos de Bergman generalizados, Buenos Aires, 1983; San Luis, Arg., 1983.
9. Grupoides en el estudio de operadores de Toeplitz en varias variables, Córdoba, Arg., 1983.
8. La enseñanza de la matemática en Estados Unidos, Mendoza, Arg., 1983.
- 1982 7. Generalized Bergman kernels, Univ. of Iowa, March 1982.
- 1981 6. Multivariable spectral theory, Univ. of Iowa, March 1981.
5. Spectral inclusion for subnormal n -tuples, Texas Tech. Univ., February 1981.
4. On the deformation problem for Fredholm n -tuples, Indiana Univ.-Purdue Univ. at Indianapolis, February 1981.
- 1979 3. N -uplas de Fredholm de operadores acotados en espacios de Hilbert, Buenos Aires, July 1979.
2. Teoría espectral en varias variables, San Luis, Argentina; Río Cuarto, Arg.; Bahía Blanca, Arg., July 1979.
1. Fredholm and invertible n -tuples, Functional Anal. Regional Meeting, Wabash, April 1979.

OTHER PAPERS PRESENTED AT REGIONAL AND NATIONAL MEETINGS

- 2013 19. A subnormal Toeplitz completion problem, Great Plains Operator Theory Symposium, University of California; Berkeley, California, May 2013.
- 2012 18. Recursively determined representing measures for bivariate truncated moment sequences, Great Plains Operator Theory Symposium, University of Houston; Houston, Texas, May 2012.

17. Hyponormality and subnormality of block Toeplitz operators, XXVIII Southeastern Analysis Seminar, University of Alabama; Tuscaloosa, Alabama, March 2012.
- 2011 16. Operators Cauchy dual to 2-hyperexpansive operators: The multivariable case, XXVII Southeastern Analysis Seminar, University of Florida; Gainesville, Florida, March 2011.
- 2008 15. Spectral pictures of hyponormal 2-variable weighted shifts, XXIV Southeastern Analysis Seminar, Vanderbilt University; Nashville, Tennessee, March 2008.
- 2007 14. Hyponormality and subnormality for powers of commuting pairs of subnormal operators, Wabash Extramural Conference in Modern Analysis; Indianapolis, Indiana, September 2007.
13. The Lifting Problem for hyponormal pairs of commuting subnormals, Great Plains Operator Theory Symposium, University of Nebraska at Lincoln, May 2007.
12. Reconstruction of the Berger measure when the core is of tensor form, XXIII Southeastern Analysis Seminar, Richmond, Virginia, March 2007.
- 2006 11. Positivity methods in multivariable operator theory, XXI Seminario Interuniversitario de Investigación en Ciencias Matemáticas, Universidad del Turabo; Gurabo, Puerto Rico, February 2006.
- 2004 10. Disintegration-of-measure techniques for multivariable weighted shifts, Wabash Extramural Conference in Modern Analysis; Indianapolis, Indiana, September 2004.
- 2002 9. N-tuples of operators satisfying $\sigma_T(AB) = \sigma_T(BA)$, Southeastern Analysis Meeting XVIII, University of North Carolina; Chapel Hill, North Carolina, March 2002.
- 2001 8. Triangular Toeplitz contractions and Cowen sets for analytic polynomials, Southeastern Analysis Meeting XVII, University of Georgia; Athens, Georgia, March 2001.
- 1995 7. Contractive completions of Hankel partial contractions, Iowa-Nebraska Functional Analysis Seminar, October 1995.
- 1989 6. The spectral picture of Reinhardt measures, Wabash Extramural Miniconference on Functional Analysis; Ann Arbor, Michigan, August 1989.
- 1985 5. Fredholm theory of left and right multiplications, Wabash Extramural Conference in Modern Analysis; West Lafayette, Indiana, October 1985.
- 1984 4. Hankel operators and uniform algebras, Session on Operator Theory, Louisville, January, 1984.
- 1982 3. Spectral properties of cyclic subnormal n-tuples, Session on Operator Theory, Cincinnati, January 1982.
- 1981 2. Spectral inclusion for double commuting subnormal n-tuples, Session on Operator Theory, San Francisco, January 1981.
- 1980 1. Fredholm and invertible n-tuples of operators. The deformation problem, Session on Operator Theory San Antonio, January 1980.

PROFESSIONAL SERVICE

Member, *Editorial Board, Banach Journal of Mathematical Analysis, April 2013 -*
 Member, *Editorial Board, International Journal of Mathematics and Mathematical*
Sciences, July 2009 -

Division Editor, *J. Math. Anal. Appl.*, July 2006 -

Associate Editor, *Filomat*, April 2006 -

Associate Editor, *Operators and Matrices*, March 2006 -

Associate Editor, *Integral Equations Operator Theory*, September 2005 -

Associate Editor, *Oper. Theory Adv. Appl.*, September 2005 -

Associate Editor, *J. Math. Anal. Appl.*, April 2002 - June 2006

Reviewer for *Zentralblatt für Mathematik*

Reviewer for *Mathematical Reviews* (126 reviews through 12/31/10)

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---------|------|------|------|------|------|------|------|------|------|------|
| Reviews | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |

| Year | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---------|------|------|------|------|------|------|------|------|------|------|
| Reviews | 11 | 6 | 7 | 7 | 5 | 4 | 6 | 3 | 1 | 0 |

| Year | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
|---------|------|------|------|------|------|------|------|------|------|------|
| Reviews | 4 | 9 | 3 | 11 | 6 | 9 | 7 | 9 | 11 | 7 |

Mathematical Reviews Featured Reviews

3. Featured Review of *Solving moment problems by dimensional extension*, by M. Putinar and F.-H. Vasilescu, *Annals of Math.* 149(1999), 1087-1107, and *The complex moment problem and subnormality: A polar decomposition approach*, by J. Stochel and F. Szafraniec, *J. Funct. Anal.* 159(1998), 432-491.
2. Featured Review of *Subnormal operators and quadrature domains*, by J. McCarthy and L. Yang, *Adv. Math.* 127(1997), 52-72.
1. Featured Review of *Extremal solutions of the two-dimensional L-problem of moments*, by M. Putinar, *J. Funct. Anal.* 136(1996), 331-364.

Book Review

Operator theory and arithmetic in H^∞ , by H. Bercovici, *Mathematical Surveys and Monographs*, 26, American Mathematical Society, Providence, RI, 1988. xii+275 pp.

Referee for (entries not followed by a date correspond to reports processed prior to 1995)

Abstract and Applied Analysis (10(2 reports))

Acta Mathematica Scientia (12(3 reports))

Acta Mathematica Hungarica (95)

Acta Scientiarum Mathematicarum (95, 96, 97, 99(2 reports), 00, 02(3 reports), 12)

Advances in Mathematics (11, 12)

American Journal of Mathematics

Analele Stiintifice ale Universitatii "Al. I. Cuza" din Iasi (12)

Annales de Mathématiques de Toulouse (08)

Annals of Applied Probability (01, 03)

Annals of Probability (07)

Annales de L'Institut Fourier
Annales Polonici Mathematici (95)
Arabian Journal for Science and Engineering (09)
Archiv der Mathematik (98(2 reports), 00(3 reports))
Arkiv för Matematik (12)
Banach Center Publications (05)
Boletín de la Sociedad Matemática Mexicana (96, 02, 04(2 reports), 05)
Bulletin American Mathematical Society
Bulletin of the Iranian Mathematical Society (95)
Bulletin of the Irish Mathematical Society (02)
Bulletin of the Korean Mathematical Society (10, 11)
Bulletin of the London Mathematical Society (12)
Canadian Mathematical Bulletin (06)
Carpathian Journal of Mathematics (12)
Comptes Rendus Mathématique. Académie des Sciences de Paris (07)
Czechoslovak Mathematical Journal (05)
Duke Mathematical Journal (04)
Extracta Mathematicae (00)
The Fibonacci Quarterly (99, 00)
Glasgow Journal of Mathematics (96, 98(2 reports), 99(3 reports), 00, 05, 07, 10)
Haceteppe Journal of Mathematics and Statistics (2011)
Hokkaido Mathematical Journal (01, 02)
Houston Mathematical Journal (95, 04)
Illinois Journal of Mathematics (04)
Indian Academy of Sciences Proceedings (Mathematical Sciences) (06)
Indiana University Mathematics Journal (97)
Integral Equations and Operator Theory (95(2 reports), 96, 97, 99(4 reports),
00(2 reports), 01(6 reports), 02(5 reports), 03(3 reports), 04(4 reports),
05(3 reports), 06(2 reports), 07(4 reports), 09(4 reports), 10(4 reports),
11(2 reports), 12)
International Journal of Analysis (12)
International Journal of Functional Analysis, Operator Theory and Applications
(09)
International Journal of Mathematics and Mathematical Sciences (95, 01, 03,
04(2 reports), 05)
Irish Mathematical Society Bulletin (04)
Journal of Applied Analysis (02(2 reports))
Journal für die Reine und Angewandte Mathematik (09)
Journal of the Australian Mathematical Society (05)
Journal of the Egyptian Mathematical Society (04)
Journal of Fourier Analysis and Applications
Journal of Function Spaces and Applications (12)
Journal of Functional Analysis (96, 98, 03, 04, 05(2 reports), 10, 12)
Journal of Geometric Analysis (95)
Journal of Inequalities and Applications (09, 10(3 reports), 12(2 reports))
*Journal of the Korean Society of Mathematical Education Series B: The Pure and
Applied Mathematics* (04)
Journal of the Korean Mathematical Society (10)
Journal of the London Mathematical Society (95(2 reports), 97, 99, 00, 01, 03, 04,
05, 08(2 reports))
Journal of Mathematical Analysis and Applications (95(2 reports), 97, 01, 03,
04(11 reports), 05, 06(2 reports), 07)
Journal of Mathematical Sciences: Advances and Applications (09)

Journal of Nonlinear Analysis (02, 08, 09(2 reports))
Journal of the Mathematical Society of Japan (02)
Journal of Operator Theory (95,98, 99, 01, 04, 07(2 reports), 12(3 reports))
Journal of the Ramanujan Mathematical Society (05)
Les Comptes Rendus de l'Académie des Sciences, France (05)
Linear Algebra and Its Applications (03, 10, 12)
Linear and Multilinear Algebra (00, 03)
Matematicki Vesnik (09)
Mathematica Bohemica (12)
Mathematica Japonica (99)
Mathematica Scandinavica (05, 12)
Mathematical Inequalities and Applications (10)
Mathematical Proceedings of the Royal Irish Academy (04, 07, 08, 09)
Mathematisches Annalen (97, 98, 99)
Mathematische Nachrichten (97, 98, 00, 06)
Mediterranean Journal of Mathematics (08, 10, 11)
Memoirs American Mathematical Society (96)
Methods and Applications of Analysis (12)
Michigan Mathematical Journal (96)
Missouri Journal of Mathematical Sciences (09, 10)
Operator Theory: Advances and Applications (95, 00)
Operators and Matrices (08, 09, 10(3 reports), 11(2 reports), 12(3 reports))
Pacific Journal of Mathematics (97, 03, 06)
Positivity (98, 00, 01, 08)
Proceedings Amer. Math. Soc. (95(4 reports), 96(3 reports), 97(3 reports), 98(6 reports), 99(4 reports), 00(5 reports), 01(5 reports), 02(2 reports), 03(2 reports), 04 (4 reports), 05(2 reports), 07(2 reports), 08, 09, 10)
Proceedings Mathematical Sciences (12)
Proceedings of the 5th Conference on Function Spaces (06)
Proceedings of the 16th Operator Theory Conference (97)
Proceedings of Cáceres 2004, in Lectures Notes, London Mathematical Society (05)
Proceedings of the Edinburgh Mathematical Society (98)
Proceedings of the Indian Academy of Sciences (00, 02)
Proceedings of IWOTA 2002 (03)
Proceedings of IWOTA 2004 (05)
Proceedings of the London Mathematical Society (09, 10)
Proceedings of Valencia 2000, in Recent Progress in Functional Analysis (01)
Publicationes Mathematicae Debrecen (09)
Publications of RIMS, Kyoto, Japan (05)
Radovi Matematicki (02)
Revue Roumaine des Mathématiques Pures et Appliquées (09)
Rocky Mountain Journal of Mathematics (97, 99, 00, 01, 07, 10)
Serdica Mathematical Journal (07)
Studia Mathematica (95, 97, 99, 05, 08)
Surveys of Mathematics and Its Applications (10)
The Theta Foundation (97)
Tohoku Journal of Mathematics
Transactions American Mathematical Society (95, 96, 00, 01(2 reports), 09, 12(2 reports))

Reviewer of research monograph for American Mathematical Society's Graduate Studies in Mathematics Series (2011)

Reviewer of research monograph for Birkhäuser Operator Theory Series (2007)

Reviewer of research monograph for Contemporary Math and Aportaciones Matemáticas (2004)

Reviewer of research monograph for Operator Theory: Adv. Appl. (2000)

Reviewer of research monograph for London Mathematical Series (1997)

Reviewer of research monograph for Kluwer Publ. Co. (1995)

Reviewer of 5th and 6th editions of Hoffman and Bradley's Calculus for Business textbook (1993, 1995)

Referee for Israel Science Foundation (grant proposals; March 2007, April 2011)

Referee for Agencia Nacional de Promoción Científica y Tecnológica (ANPCyT), Argentina, 2006

Referee for U.S. Civilian Research and Development Foundation's Cooperative Grants Program, June 2003

Referee for U.S./Israel Binational Science Foundation, April 2003

Referee for U.S.-Armenian Bilateral Grants Program, March 2002

Referee for Puerto Rico EPSCoR's Scholarly Productivity Award, April 2001

Referee for Research Council of Canada (grant proposals; 1994)

Referee for International Science Foundation (grant proposals; 1995)

Referee for J. Guggenheim Foundation (fellowship proposals; 1993, 1995)

Referee for NSERC (Canada) (grant proposals; 2004, 2005, 2007, 2010, 2011)

Referee for National Science Foundation (grant proposals; 1993(4 proposals), 1994(5 proposals), 1995(6 proposals), 1996(5 proposals), 1997(2 proposals), 2005(2 proposals), 2006(1 proposal), 2007(3 proposals))

Member, National Science Foundation Grant Proposal Review Panel, September 2008 (28 proposals)

Member, National Science Foundation Grant Proposal Review Panel, September 2007 (21 proposals)

Member, National Science Foundation Grant Proposal Review Panel, December 2004 (63 research proposals)

Member, National Science Foundation Grant Proposal Review Panel, January 2002 (51 research proposals)

Member, National Science Foundation Grant Proposal Review Panel, February 1999 (49 research proposals)

Ph.D. Dissertation outside reviewer, University of Pune, India, February 2007

Ph.D. Dissertation outside reviewer, IVIC, Caracas, Venezuela, February 2000

Ph.D. Dissertation outside reviewer, CINVESTAV del I.P.N., Mexico City, September 1999

Ph.D. Dissertation outside reviewer, Monash Univ., Australia, February 1994

Ph.D. Dissertation outside reviewer, SUNY at Buffalo, August 1986

Outside referee for "Habilitationsschrift", Universität Tübingen, Germany, Feb 1991

External reviewer for promotion and tenure

Central Michigan University, 2012 (Professor Sal. Incr. review)

University of Denver, 2012

Bucknell University, 2012

University of Arkansas, 2010 (Distinguished Prof. Rev. Cmte.)

University of Denver, 2010

Kansas State University, 2009

Central Michigan University, 2008 (Professor Sal. Incr. review)

Vanderbilt University, 2007

University of Botswana, 2006
Bucknell University, 2006
Univ. California Santa Barbara, 2005
Mississippi State University, 2004 (req. by Distinguished Prof. Rev. Cmte.)
Bucknell University, 2003
Central Michigan University, 2003 (Professor Sal. Incr. review)
Iowa State University, 2002
Univ. California San Diego, 2002
University of Texas at Dallas, 2002
University of Waterloo, 2002
Bucknell University, 2001
Western Michigan University, 2001
Central Michigan University, 2000
Western Michigan University, 1999
UC Riverside, 1997
Universität des Saarlandes, Saarbrücken, Germany, 1995
UT San Antonio, 1994
Bucknell University, 1994
UC Riverside, 1993
University of Kansas, 1993
University of Kansas, 1990
Univ. Nac. Buenos Aires, 1988-90

External reviewer, University of Waterloo, Ontario, Canada (Department of Pure Mathematics), July 2002

External reviewer, University of Nebraska at Lincoln (Department of Mathematics), February 2001

External consultant, University of Alabama, Tuscaloosa (review of Department of Mathematics), October 2000

Member, Steering Committee, International Workshop on Operator Theory and Applications, June 2006 –

Member, Committee on Human Rights of Mathematicians, American Mathematical Society, Feb 1, 2009 – Jan 31, 2012 (Chair during CY 2011)

Co-organizer (with A. Donsig, J. Peters, D. Pitts and Y.-T. Poon), Iowa-Nebraska Functional Analysis Seminar, Drake University, March 1994, October 1994, April 1995, October 1995, April 1996, October 1996, April 1997, October 1997, April 1998, October 1998, April 1999, October 1999, April 2000, October 2000, October 2001, April 2002, October 2002, April 2003, October 2003, October 2004, April 2005, April 2006, April 2007, April 2008, April 2009, November 2009, April 2010, April 2012, November 2012.

Co-organizer (with P. Jørgensen and P. Muhly), Great Plains Operator Theory Symposium, Iowa City, Iowa, May 2006

Co-organizer (with P. Jørgensen and P. Muhly), Workshop on Recent Developments in Moments and Operators, Iowa City, Iowa, March 1996

Co-organizer (with P. Jørgensen), Great Plains Operator Theory Symposium, Iowa City, Iowa, May 1992

DEPARTMENTAL, COLLEGIATE AND UNIVERSITY COMMITTEES, AND OTHER SERVICE

- Mathematics Department Executive Committee: 1983-89 (chair in 86 and 89)
- Mathematics Department Divisional Committee: 1984-86
- Mathematics Department Graduate Committee: 1982-98 (chair during 90-95)
- Mathematics Department Hiring Committee: 1990-95 (ex-officio member)
- Mathematics Department Hiring Plan Committee: 1991-93
- Mathematics Department Ad-Hoc Calculus Committee: 1986-87
- Mathematics Department Ph.D. Comprehensive Exam Committee: 1984-86; 1990-95 (chair)
- Mathematics Department Evaluation of Teaching Effectiveness Committee: 1986-88 (chair)
- Mathematics Department M.S. Comprehensive Exam Committee: 1984-86; 1990-95
- Mathematics Department Promotion and Tenure Committee: Fall 1994, Fall 1995
- Mathematics Department Ad-Hoc Bylaws Committee: 1995-96
- Mathematics Department Advisory Committee for Merit Raises: Spring 1996
- Mathematics Department Minority Student Recruitment and Development Committee (a.k.a. Committee for Diversity and Inclusion): 1994 - present
- Mathematics Department Oral Ph.D. Exam Committees: Paulette Willis (2007); Cecil Flournoy (2008); Andrew Greene (April 2009); Bogdan Udrea (October 2009); Travis Wolf (April 2010); David Gaebler (October 2010); Jennifer Good (May 2012)
- Mathematics Department Ph.D. Dissertation Committees: Héctor Salas; John Froelich; Humberto Prado; Ana Paolucci; Juliana Erlijman; Valentin Deaconu; George Ji; Yuan-Ching Huang; Razvan Gelca; Eui-Chan Jeong; Alberto Marrero (April 2005); Marius Ionescu (May 2005); Stefan Bildea (July 2005); Paulette Willis (April 2010); Sam Schmidt (April 2010); Bogdan Udrea (June 2012); Andrew Greene (June 2012)
- Mathematics Department Representative, SIDIM Annual Meeting, Puerto Rico, February 2006
- Invited speaker, First Year Graduate Seminar, Department of Mathematics, 10/26/01, 9/24/04, 11/09/07, 12/02/11
- Invited speaker, Undergraduate Research Seminar, Department of Mathematics, 5/3/06 and 2/15/07
- Summer Mentor, AGEP and VIGRE grants, June 2004 – present: have directed research projects for eight undergraduates from HBCU, Alliance and Heartland institutions

- Mathematics/Mathematics Education Hiring Committee, 91-92
- Mathematics Education Hiring Committee, 90-92

- Spanish and Portuguese Ph.D. Dissertation Committee (C. Bustamante, April 1996; Luis Linares, December 1996; Ivonne Cuadra, December 1996)

- Electrical Engineering Ph.D. Comprehensive Exam Committee, (88-90)
- Mechanical Engineering M.S. Comprehensive Exam Committee, (88-89)

- External Reviewer, Beam Travel Grant Program (WISE), May 2009
- Judge, James F. Jakobsen Graduate Conference, March 2009; March 2010; March 2011; March 2012
- Member, Review Panel, UI Mathematics and Physical Sciences Funding Program (MPSFP), Spring 2008

Member, College of Liberal Arts, Faculty, Van Allen, and Global Scholarship Committee, Fall 1995

Interim Chair, Department of African American World Studies, 2003-04
Acting Chair, Department of Russian, 2000-01
Chair, African American World Studies Program Search Committee, 97-98 and 98-99
Panelist, New-DEO Orientation Program (College of Liberal Arts), August 1995

Office of the Registrar's Review Committee (chair), 1995-96
International Programs Linkages Committee (chair), 1997-00
UI International Programs Advisory Council, 1997-99
Latino Council (a.k.a. Council on the Status of Latinos), 1992- (currently serving as Member-at-Large on Executive Committee)
ULA Linkage Committee (chair), 1995-00
ULA Committee, 1989-1994
Faculty Council, 1996-2000
Faculty Senate, 1996-2000

Associate Provost for Faculty Search Committee (co-chair), Fall 2009
Member, UI ARRA Review Panel, Summer 2009
EVP and Provost Search Committee (co-chair), Fall 2007 and Spring 2008
Division of Performing Arts Search Committee (chair), Fall 2006
EOD Director Search Committee (chair), Spring 2006
Associate Provost Search Committee (Faculty, International Programs and Continuing Education), Spring 2005
Human Resources Associate Vice President Search Committee, Spring 2002
Opportunity at Iowa Program Assistant Search Committee, Spring 1998
Provost Search Committee, Spring 1996

Member, Provost's Task Force on Strategic Budgeting (2009)
UI Diversity Action Committee (co-chair), Spring 2005 – Spring 2006
Member, UI General Education Fund Task Force, Spring 2004
Division of Continuing Education Review Committee, Spring, Summer and Fall 2003
UI Deaf Services Task Force (chair), Spring and Fall, 2002
Employment and Labor Relations Unit Review Committee, Spring 2000
College of Public Health Advisory Board, 1999-2001
Iowa Social Science Institute Advisory Board, Spring 1999, 1999-2000
Ad Hoc Committee to Review Immigration Specialist Office, 1999
Office of Affirmative Action RA Review Committee, 1999-2000
Member, Faculty and Staff Advisory Board, *Illumine*, 1997-2003
UI Collegiate Diversity Group, 1997 - present
UI Diversity Dialogue Film Series panelist (*Shattering the Silences: The Case for Minority Faculty*), December 2002
UI Diversity Dialogue Groups, co-facilitator, Fall 1997
UI Diversity Dialogue Groups, Facilitator Training Program, participant, 1996-97
Foreign Student Recruitment and Retention Committee (chair), 1995-96

Speaker, UI Tenure Workshop, April 2008; April 2010; April 2011; April 2012
Welcome Address, 12th Annual UI Mathematics Tournament, March 2008
Member, Kenneth J. Cmiel Human Rights Internship Selection Committee, March 2008
Keynote Speaker, Commencement Program, *Bridging Domestic and Global Diversity: A Training Program for Student Leaders*, December 2007
Breakfast Speaker, *Iowa Edge*, August 2006

Panelist, *Leading Diversity Initiatives*, UI Equal Opportunity and Diversity Office, May 2006
Participant, *Regional Black Faculty and Staff Recruitment and Retention Summit*, Spring 2006
Participant, *Belin-Blank Center Focus Group*, 11/18/05
Participant, *Telethon Pilot Project*, Office of the Provost, Fall 2005
Participant, *Alcanza tu sueño*, UI Latino Night at West Liberty High School, Spring 2005, Fall 2005
Participant, *Setting the Stage for Culturally Inclusive Classes*, Penn State University, April 27-28, 2005
Luncheon Speaker, *The Future is Yours at Iowa*, April 2004
Welcome Address, UI Second Annual Latino Youth Conference, Fall 2001
Presenter, *Prepare Our Sons for Life*, UI Worklife Program, Fall 2000
Panelist, *Workshop on Career Development*, Latino Student Union, Fall 1997
Keynote Speaker, Foreign Student Graduation Lunch, Spring 1997
Panelist, *Diverse paths: Building successful careers*, Spring 1997
Panelist, *CARPE Campus Conference* (sponsored by Upward Bound), Fall 1996
Welcome message, Iowa Sociological Association Annual Meeting, Spring 2006
Participant, *Scholar's Day*, Fall 1995
Participant, *Opportunity at Iowa Day*, Fall 1995
Participant, *Transfer Day*, Fall 1995, Spring 1996
Participant, *Hawkeye Visit Day*, Fall 1995, Spring 1996
Participant, *The Future is Yours*, Spring 1995
Lecturer, *Workshop on Professional Issues*, Spring 1995
Panelist, *Symposium on Undergraduate Education (Presidential Search)*, Fall 1995

CIC Academic Leadership Fellow, 1995-96

UI Representative, Inauguration of Rector Pachano, ULA, Mérida, Venezuela, Fall 1996
UI Representative, Conference on International Activities in Changing Global and Regional Contexts: The CIC Agenda, Fall 1996
CIC Mathematics Initiative, UI Representative, Spring 1996

PH.D. DISSERTATIONS DIRECTED

7. *Seonguk Yoo*, December 2010 (Visiting Assistant Professor, Univ. of Iowa)
6. *Jasang Yoon*, July 2003 (Associate Professor, University of Texas Pan American)
5. *José Giménez*, July 2000 (Associate Professor, Universidad de Los Andes, Mérida, Venezuela)
4. *Razvan Gelca*, August 1997 (Associate Professor, Texas Tech University; winner, D.C. Spriestersbach Dissertation Award, 1998; dissertation co-directed with C. Frohman)
3. *George Ji*, December 1996 (Senior Manager, Alcatel-Lucent, Chicago, Illinois)
2. *Ximena Catepillán*, May 1991 (Associate Professor, Millersville University of Pennsylvania)
1. *Patricio Olivares*, May 1991 (Associate Professor, Instituto Profesional de Santiago and Universidad Católica, Chile)

SUPERVISION OF POSTDOCTORAL WORK

10. *Hyoung Joon Kim*, Seoul National University, Seoul, Korea, Feb 2011 – Dec 2012
9. *Young Min Han*, Kyunghee University, Seoul, Korea, Feb 2010 – Feb 2011 (Assistant Professor, Kyunghee University, Seoul, Korea)
8. *Sang Hoon Lee*, Sun Kyun Kwan University, Suwon, Korea, July 2001, July 2002, March 2004 – May 2006.
7. *Young Min Han*, Sun Kyun Kwan University, Suwon, Korea, Jan 2001 - Dec 2003 (Assistant Professor, Kyunghee University, Seoul, Korea)
6. *Sang Soo Park*, Kyungpook University, Taegu, Korea, Jan/Aug 2001 (Postdoctoral Fellow, Kyungpook National University, Korea)
5. *Teresa Bermúdez*, Universidad de la Laguna, Tenerife, Spain, Jan/Dec 1997 (Associate Professor, Universidad de La Laguna)
4. *Il Bong Jung*, Kyungpook National Univ., Korea, Jan/Feb 1996 (Professor, Kyungpook National University, Korea)
3. *Renyi Jian*, Guizhou Normal University, Guiyang, P.R.C., 1992-93 (Associate Professor, Ningxia University, Yinchuan, P.R.C.)
2. *Keren Yan*, SUNY at Stony Brook, 1988-89 (Employed at Citibank, High Finance and Mathematics Division)
1. *Jingbo Xia*, SUNY at Stony Brook, 1983-84 (with P. Muhly) (Professor, SUNY at Buffalo)