

**SUMMARY OF SCHOLARLY and PROFESSIONAL ACTIVITIES**

**JOSEPH ROSENBLATT**

US Citizen

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**I. Educational History**

<u>Degrees</u>	<u>Institution</u>	<u>Dates Awarded</u>
Ph.D.	University of Washington	August 1972
B.A.	Reed College	May 1968

**Professional Experience**

<u>Position</u>	<u>Institution</u>	<u>Dates</u>
Prof. Emeritus, Dept. of Math	U. of I. Urbana-Champaign	2014-present
Adjunct, IDA CCS	Bowie, MD	2017-present
Prof., Dept. of Math Sciences	IUPUI	2014-2019
Chair, Dept. of Math Sciences	IUPUI	2014-2016
Prof., Dept. of Math	U. of I. Urbana-Champaign	1994-2014
NSF DMS Program Director	National Science Foundation	2006-2008
Interim Chair, Dept. of Math	U. of I. Urbana-Champaign	March 2006-August 2006
Chair, Dept. of Math	U. of I. Urbana-Champaign	July 1999-July 2004
Prof., Dept. of Math	Ohio State University	1988-1994
Assoc. Prof., Dept. of Math	Ohio State University	1981-1988
Assoc. Prof., Dept. of Math	University of Missouri	1981-1982
Assist. Prof., Dept. of Math	Ohio State University	1974-1981
Postdoctoral Fellow	University of B.C.	1972-1974
Graduate Student	University of Washington	1968-1972

## II. Summary of Research and Creative Work

### A. Research Grants Funded

1. NSF Grant 7604420, Almost everywhere convergence, 1976-1977, \$6,600
2. NSF Grant 7802403, Convergence problems in ergodic theory, 1978-1979, \$8,265
3. NSF Grant 8002881, Phase retrieval problems, 1980-1982, budget combined with NSF Grant 8002881,
4. NSF Grant 8002881, Uniqueness of invariant means, random walks on groups, and phase retrieval problems in spectroscopy, 1982-1984, \$38,364
5. NSF Grant 8402718, Problems in harmonic analysis, 1984-1986, \$37,800
6. NSF Grant 8521686, Problems in harmonic analysis, 1986-1988, \$35,000
7. NSF Grant 8802126, Problems in harmonic analysis and ergodic theory, 1988-1991, \$270,357, Co-PIs Vitaly Bergelson, Joseph Rosenblatt, and Louis Sucheston
8. NSF Grant 9103056, Problems in harmonic analysis and ergodic theory, 1991-1994, \$267,050, Co-PIs Vitaly Bergelson, Joseph Rosenblatt and Tom Ward
9. NSF Grant 9401093, Problems in harmonic analysis and ergodic theory, 1994-1997, \$255,000, Co-PIs Vitaly Bergelson, Joseph Rosenblatt, Mark Shereshevsky, and Tom Ward
10. NSF Grant 9705228, Convergence and oscillation in ergodic theory and harmonic analysis, 1997-2000, \$126,694. This grant included participant support for the meeting sponsored by the New York Journal of Mathematics (organizers: Jerry Bona, Karin Reinhold, Joseph Rosenblatt, Cesar Silva, Birgit Speh, and Mark Steinberger) held at SUNY Albany in June, 1997. This grant was also given a supplement for RA support during the academic year 1998-1999.
11. NSF Grant 0528211 for support of the Conference on Ergodic Theory and Harmonic Analysis, PI Ahmed Zayed, CoPIs Joseph Rosenblatt and Alex Stokolos, \$20,000, duration 9/05 to 8/06.
12. NSF Grant 0555905, Best norm constants and weak-type inequalities for operators in harmonic analysis, 2006-2011, change of PI from P. Janakiraman, summer 2009, \$83,624
13. Simons Collaboration Grant, 2013-2018, \$35,000.

### B. Infrastructure or Training Grants Funded

1. NSF Grant 9215965 for support of the Conference on Convergence in Ergodic Theory and Probability, June, 1993, organizers Vitaly Bergelson, Joseph Rosenblatt, and Peter March, \$8,475, with additional funds from the Army Research Office (\$5,513), the Mathematical Institute at The Ohio State University (\$7,200), and the College of Math and Physical Sciences at The Ohio State University (\$5,000)
2. University of Illinois Research Board Grant, to study problems in harmonic analysis and ergodic theory, Academic Year 1995-1996 and Summer of 1996, \$14,690 for support of research assistants
3. NSF SCREMS grant for purchasing computer equipment for computational mathematics research, Co-PIs Stephanie Alexander, Douglas Bowman, Nick Firoozye, John Gray, and Joseph Rosenblatt, 1995-1996, \$47,709, with matching from the Research Board at the University of Illinois, \$30,000
4. Beckman Research Award, University of Illinois Research Board Grant, to study harmonic analysis and applications, Academic Year 1996-1997, \$25,400 for support of research assistants
5. University of Illinois Research Board Grant, to study problems in harmonic analysis and ergodic theory, Academic Year 1997-1998, \$12,365 for support of research assistants

6. University of Illinois Research Board Grant, to study problems in harmonic analysis and ergodic theory, Academic Year 1998-1999 and Summer of 1998, \$16,340 for support of research assistants
7. NSF SCREMS grant for computational mathematics research, Co-PIs Aimo Hinkkanen, Leon McCulloh, Joseph Rosenblatt, Paul Schupp, and Ken Stolarsky, 1998-1999, \$40,000. This grant also received matching funds from the University of Illinois Research Board (\$30,000) and the College of Liberal Arts and Sciences (\$11,457)
8. University of Illinois Research Board Grant, to study harmonic analysis, theory and applications, Academic Year 1999-2000 and Summer of 1999, \$16,668 for support of research assistants
9. University of Illinois Research Board Grant, to study the long range behavior of dynamical systems, Summer 2000 and academic year 2000-2001, \$17,360 for support of research assistants
10. University of Illinois Research Board Grant, to study dynamical systems, Summer 2002 and academic year 2002-2003, \$18,772 for support of research assistants
11. NSF VIGRE grant (PI Joseph Rosenblatt, CoPIs John D'Angelo, Paul Weichsel, Graham Evans, Phil Griffith), 2000-2007, \$3,697,826
12. NSF grant for IPA position as Program Director in the Division of Mathematical Sciences at NSF, 2006-2008.

### C. Awards, Fellowships, Prizes

1. NSF Fellowship, physics, fall 1965, Reed College.
2. NSF Fellowship, mathematics, summer 1967, Reed College.
3. Phi Beta Kappa, Reed College, 1968.
4. NSF Trainee Fellowship, mathematics, University of Washington, summers of 1969, 1970, and 1971.
5. NDEA Title IV Fellow at University of Washington for nearly two years.
6. Two years Postdoctoral Research Fellow at the University of British Columbia, 1972-1974.
7. LAS Fellow for Study in a Second Discipline, 1998-1999, to work in Electrical and Computer Engineering and the Coordinated Sciences Laboratory on signal processing, tomography, and related topics.

**D. Publications** (jointly authored mathematical articles are published with the authors' names listed in alphabetical order by last name; mathematical articles are jointly authored when each of the authors make substantial, and usually equal, contribution to the research)

1. A Generalization of Følner's Condition, *Mathematica Scandinavica*, No. 3 (1973) 153-170.
2. Invariant Measures and Growth Conditions, *Transactions AMS* 193 (1974) 33-53.
3. Equivalent Invariant Measures, *Israel Journal of Math* 17 No. 3 (1974) 261-270.
4. Totally-disconnected Compact Metric Groups, *Fundamenta Math* 94 (1977) 97-106.
5. Invariant Means and Invariant Ideals in  $L_\infty(G)$  for a Locally Compact Group  $G$ , *J. of Functional Analysis* 21 No. 1 (1976) 31-51.
6. Invariant Means for the Bounded Measurable Functions in a Non-discrete Locally Compact Group, *Math Annalen* 220 (1976) 219-228.
7. The Number of Extensions of an Invariant Mean, *Compositio Math* 33 (1976) 147-159.
8. Invariant Means on the Continuous Bounded Functions, *Transactions AMS* 236 (1978) 315-324.

9. Uniform Distribution in Compact Groups, *Mathematika* 23 (1976) 198-207.
10. Convergence of Series of Translations, *Math Annalen* 230 (1977) 245-272.
11. The Sequence of Greatest Integers of an Arithmetic Progression, *Journal London Math Society* 17 (1978) 213-218.
12. Difference Equations over Locally Compact Abelian Groups (joint with G. Edgar), *Transactions AMS* 253 (1979) 273-289.
13. Finitely-additive Invariant Measures, II (joint with J. Mycielski), *Colloquium Math* 42 (1979) 361-363.
14. Counterexamples in Ergodic Theory and Number Theory (joint with A. del Junco), *Math Annalen* 245 (1979) 185-197.
15. A Distal Property of Groups and the Growth of Connected Locally Compact Groups, *Mathematika* 26 (1979) 94-98.
16. Strongly Equivalent Invariant Measures, *Cambridge Philosophical Society*, 88 (1980) 33-43.
17. Determining Sets and Best  $L_1$  Approximation, *Journal of Approximation Theory*, 32 (1981) 103-114.
18. Different Types of Invariant Means (joint with M. Talagrand), *J. London Math.*, 24 (1981) 525-532.
19. Uniqueness of Invariant Means for Measure-preserving Transformations, *Transactions AMS* 265 (1981) 623-636.
20. Ergodic and Mixing Random Walks on Locally Compact Groups, *Math Annalen*, 257 (1981) 31-42.
21. The Structure of Homometric Sets (joint with P. Seymour), *SIAM Alg. and Discrete Methods* 3 (1982) 343-350.
22. Immediate Conditional Hyperbolicity in Dynamical Systems (joint with D. Swanson), *Ergodic Theory and Dynamical Systems* 3 (1983) 627-647.
23. Mathematical Modeling of the Relationship of Feed Efficiency, Days to Market Weight, and Costs of Production (joint with G. Miller), *Growth* 48 (1984) 254- 267.
24. Approximating Compact Operators by Sums of Translations on Locally Compact Groups (joint with A. Lau, C. Chou), *Illinois J. Math* 29 No. 2 (1985) 340-350.
25. Projections onto Translation-invariant Subspaces of  $L_1(G)$  (joint with D. Alspach and A. Matheson), *Journal of Functional Analysis* 59 (1984) 254-292.
26. Phase Retrieval, *Comm. in Mathematical Physics* 95 (1984) 317-343.
27. Ergodic Group Actions, *Arch. Math* 47 (1986) 263-269.
28. Translation Invariant Linear Forms on  $L_p(G)$ , *Proceedings of the American Math Society* 94 No. 2 (1985) 226-228.
29. Determining a Distribution from the Modulus of its Fourier Transform, *Complex Variables and Applications* 10 (1988) 319-326.
30. The Effects of Supply Shifts on Producers' Surplus (joint with G. Miller and L. Hushak), *Amer. J. Ag. Econ.* 70 no. 4 (1988) 886-891.
31. Mixing Actions of Groups (joint with V. Bergelson), *Illinois J. Math.* 32 (1988) 65-80.
32. Joint Ergodicity for Group Actions (joint with V. Bergelson), *Ergodic Theory and Dynamical Systems* 8 (1988) 351-364.
33. Separating Sets by Fourier-Stieltjes Transforms (joint with D. Alspach and A. Matheson), *J. Functional Analysis* 84 no. 2 (1989) 297-311.

34. Almost Everywhere Convergence of Series, *Math Annalen* 280 (1988) 565-577.
35. Infinity and Enumeration, an expository article for undergraduates, *Math Spectrum* 23 no. 2 (1990/91) 70-74.
36. Infinity and Limits, an expository article for undergraduates, *Math Spectrum* 23 no. 4 (1990/91) 44-54.
37. Infinity and Geometry, an expository article for undergraduates, *Math Spectrum* 23 no. 3 (1990/91) 132-136.
38. Homometric Elements in Semisimple Rings (joint with D. Shapiro), *Communications in Algebra* 17(12) (1989) 3043-3051.
39. Convergence for Moving Averages (joint with A. Bellow and R. Jones), *Ergodic Theory and Dynamical Systems* 10 (1990) 43-62.
40. Almost Everywhere Convergence of Weighted Averages (joint with A. Bellow and R. Jones) *Math Annalen* 293 (1992) 399-426.
41. Functions with Unique Mean Values (joint with Z. Yang), *Illinois Journal of Math* 34(1990)744-764.
42. Almost Everywhere Convergence of Powers (joint with A. Bellow and R. Jones), *Almost Everywhere Convergence, Proceedings of the Conference on A.E. Convergence and Probability Theory*, Spring, 1988, OSU, pp. 99-120, Academic Press, New York, 1989.
43. Harmonic Analysis and Ergodic Theory (joint with A. Bellow and R. Jones), *Almost Everywhere Convergence, Proceedings of the Conference on A.E. Convergence and Probability Theory*, Spring, 1988, OSU, pp. 73-98, Academic Press, New York, 1989.
44. Universally Bad Sequences in Ergodic Theory, *Almost Everywhere Convergence, II, Proceedings of the Conference on A.E. Convergence and Probability Theory*, Fall, 1989, Northwestern University, Academic Press, New York, 1991, pp. 227-246.
45. Automatic Continuity is Equivalent to Uniqueness of Invariant Means, *Illinois Journal of Math* 35(1991)339-348.
46. Almost Everywhere Convergence in Ergodic Theory, abstract for the *Proceedings of the Fifth Conference on Probability and Statistics*, Vilnius, Lithuania, 2 pages (3 pages in Russian).
47. Almost Everywhere Limit Convergence of Subsequences of Powers (joint with V. F. Gaposhkin), *Probability Theory and Mathematical Statistics, Proceedings of the Fifth Conference on Probability and Statistics*, Vilnius, Lithuania, 1989, Vol. I, 391-400, Mokslas, Utrecht, 1990.
48. On the Critical Part of a Weakly Almost Periodic Function (joint with W. Reuss and D. Sentilles), *Houston Journal of Math* 17 (1991) 237-249.
49. Linear Independence of Translations, *Journal of the Australian Math Society* 59 (1995) 131-133.
50. Poincaré Return Times as Universal Sequences, *Bull. London Math. Soc.* 26 (1994) 277-282.
51. A New Maximal Inequality and its Applications (joint with M. Wierdl) *Ergodic Theory and Dynamical Systems* 12 (1992) 509-558.
52. Ergodic Theorems for Convolutions of a Measure on a Group (joint with Roger Jones and Arkady Tempelman), *Illinois Journal of Math* 38 (1994) 521-553.
53. Norm Convergence in Ergodic Theory and the Behavior of Fourier Transforms, *Canadian Journal of Math* 46 (1994) 184-199.
54. Almost Everywhere Convergence of Convolution Powers (joint with A. Bellow and R. Jones), *Ergodic Theory and Dynamical Systems*, 14 (1994) 415-432.

55. Pointwise Ergodic Theorems via Harmonic Analysis (joint with M. Wierdl), in the Proceedings of the Conference on Ergodic Theory and its Connections with Harmonic Analysis, Alexandria, Egypt, Cambridge University Press, 1994, pages 3- 151.
56. Square Functions in Ergodic Theory, (joint with Iossif Ostrovskii and Roger Jones), *Ergodic Theory and Dynamical Systems* 16 (1996) 267-305.
57. Concentration Functions on Locally Compact Groups, (joint with Wojciech Jaworski and George Willis), *Math Annalen* 305 (1996) 673-691.
58. Oscillation in Ergodic Theory (joint with R. Jones, R. Kaufman, and M. Wierdl), *Ergodic Theory and Dynamical Systems* 18 (1998) 889-935.
59. Unconditional Convergence of Differences in Ergodic Theory (joint with B. Johnson), preprint, 45 pages.
60. When the Integral is the Limit, *Journal of Mathematical Analysis and Applications*, 205 (1997) 560-567.
61. Proceedings of the Conference on Ergodic Theory and Probability, June, 1993, Ohio State University, Editors Vitaly Bergelson, Peter March, and Joseph Rosenblatt, de Gruyter, Berlin, New York, 1996.
62. On the Rate of Convergence of Series of Banach Space Valued Random Elements (joint with A. Rosalsky), to appear in the Proceedings of the Second World Congress of Nonlinear Analysis, Athens, Greece, Vol. 30:7 (1998) 4237-4248.
63. On Convergence of Series of Random Variables with Applications to Martingale Convergence and to Convergence of Series with Orthogonal Summands (joint with A. Rosalsky), *Stochastic Analysis and Applications* 16(3) (1998) 553-566.
64. A Binary Markov Model for the Quantized Wavelet Coefficients of Images and its Rate/Distortion Optimization (joint with S. D. Servetto and K. Ramchandran), Proceedings of the IEEE International Conference on Image Processing, Santa Barbara, 1997, 4 pages.
65. A Problem on Constants, *American Mathematical Monthly, Problems and Solutions, Problems Section # 10604*, Vol. 104, no. 6 (1997) 567; A Supremum of Sine Differences, *American Mathematical Monthly, Problems and Solutions, Solutions Section*, Vol. 106, no. 4 (1999) p. 368.
66. Counting in Ergodic Theory (joint with R. Jones and M. Wierdl), *Canadian Journal of Mathematics* 51 (1999) 996-1019.
67. Oscillation in Ergodic Theory: Higher Dimensional Results (joint with R. Jones and M. Wierdl), *Israel Journal of Mathematics* 135 (2003) 1-27.
68. Reverse Inequalities (joint with R. Jones), *Journal of Fourier Analysis and Applications* Vol. 6, issue 3 (2000) 325-341.
69. The Worst Sums in Ergodic Theory, (joint with M. Akcoglu and R. Jones) *Michigan Mathematics Journal* 47 (2000) 265-285.
70. Weak Convergence is Not Strong Convergence for Amenable Groups, (joint with G. Willis), *Canadian Mathematical Bulletin* 44 (2) (2001) 231-241.
71. Differential and Ergodic Transforms, (joint with R. Jones), *Mathematische Annalen* 323 (2002) 525-546.
72. Sampling Bounds and Stability, Proceedings of the Wavelet Analysis and Multiresolution Methods, Ed. T-X He, Marcel Dekker Lecture Notes in Pure and Applied Mathematics, New York-Basel (2000) 299-316.
73. Oscillation Inequalities for Rectangles, (joint with R. Jones and M. Wierdl), Proceedings of the AMS 129 (2000) 1349-1358.

74. Modulated and Subsequential Ergodic Theorems, (with D. Berend, M. Lin, and A. Tempelman), *Ergodic Theory and Dynamical Systems* 22 (2002) 1-13.
75. Group Actions and Singular Martingales, (with M. Taylor and D. Stroock), *Ergodic Theory and Dynamical Systems* 23 (2003) 293-305.
76. Group Actions and Singular Martingales II, The Recognition Problem (joint with M. Taylor), *Canadian Journal of Mathematics* 56 (2004) 431-448.
77. Cyclic Functions, (joint with K. Shuman), *Fourier Analysis and Applications* 9 (2003), 289-300.
78. Forcing Divergence when the Supremum is not Integrable, (joint with G. Argiris), *Positivity* 10 (2006), no. 2, 261-284.
79. Characterizations of Regular Almost Periodicity in Compact Minimal Abelian Flows (joint with A. Miller), *Transactions of the AMS* 356 no. 12 (2004) 4909-4929.
80. Dynamics via Measurability (joint with S. Butler), *Abstr. Appl. Anal.* 2006, Art. ID 81356, 15 pp.
81. Uniformly Cyclic Vectors, *Colloq. Math.* 104 (2006), no. 1, 21-32.
82. Equivalent  $\sigma$ -Finite Invariant Measures (joint with S. Butler and W. Kosek), *Journal of Mathematical Analysis and Applications* 324 (2006) no. 2, 850-861.
83. The Multiterminal Source Coding Problem for Spatial Waves (joint with S. D. Servetto), *Proceedings of the UCSD Workshop on Information Theory and its Applications, San Diego, CA, February 2006*.
84. Convergence of Sequences of Convolution Operators, *New Zealand Journal of Mathematics* 38 (2008) 137-147
85. Characterizing Strong Estimates (with C. Liu), *Proc. Amer. Math. Soc.* 136, no. 2 (2008) 557-567.
86. The Fine Structure of Divergence of Lebesgue Derivatives, preprint, 17 pages.
87. The Mathematical Work of Roger Jones, pp. 9-30, *Topics in Harmonic Analysis and Ergodic Theory* (Editors J. Rosenblatt, A. Stokolos and A. Zayed) *AMS Contemporary Mathematics*, Volume 444, Providence, 2007.
88. Linear Independence of Translations, *International Journal of Pure and Applied Mathematics* 45 No. 3 (2008) 463-473.
89. Moving Averages (with S. Butler), *Colloquium Math* 113, no. 2 (2008) 251-266.
90. Distinguishing Transformations by Averaging Methods, *Proceedings of the 2007-2008 Ergodic Theory Workshops*, edited by Idris Assani, *AMS Contemporary Mathematics* 485 (2009) 143-158.
91. Large Deviations for Martingales and Derivatives (with S. Butler, S. Pavlov), *Journal of Math Analysis and Applications* 366 (2010) 67-80.
92. Duality for Averaging Methods, *Far East Journal of Dynamical Systems* 12, no. 1 (2010) 11-29.
93. Growth of maximal functions (with S. Butler), *New York Journal of Math* 18 (2012) 523-549.
94. Moving averages in the plane, (with L. Moonens), *Illinois Journal of Mathematics*, Volume 56, Number 3, Fall 2012, Pages 759-793.
95. Partitions for optimal approximation, *International Journal of Mathematical Analysis* Vol. 7, no. 58 (2013) 2861-2878.
96. Rigidity and non-recurrence along sequences (with V. Bergelson, A. del Junco, and M. Lemanczyk), *Ergodic Theory Dynam. Systems* 34 (2014), no. 5, 1464-1502.

97. Continuity testing families (with K. Ciesielski), *Colloquium Math* 135 (2014), no. 2, 211-225.
98. Multidimensional averaging over thin sets (with A. Parrish and P. LaVictoire), *Transactions of the AMS* 366 (2014) 2975-3025.
99. The joys of Haar measure [book review of MR3186070]. *Bull. Amer. Math. Soc. (N.S.)* 52 (2015), no. 4, 733-738.
100. Optimal norm approximation in ergodic theory, *Ergodic theory*, 40-76, De Gruyter, Berlin, 2016.
101. Joint coboundaries (with T. Adams), *Dynamical systems, ergodic theory, and probability: in memory of Kolya Chernov*, 5-33, *Contemporary Math*, 698, AMS, Providence, RI, 2017.
102. Full divergence and maximal functions with cancellation (with A. Parrish), *Colloquium Mathematicum* 152, no. 1 (2018) 97-121.
103. Optimal quantization for piecewise uniform distributions (with M. K. Roychowdhury), *Unif. Distrib. Theory* 13 (2018), no. 2, 2355.
104. Good and bad functions for bad processes (with A. Parrish), *Dynamical Systems and Random Processes*, 171-186, *Contemporary Math* 736, AMS, Providence, RI, 2019.
105. Optimal quantization via dynamics (with M. K. Roychowdhury), *Dynamical Systems* 35, no. 3 (2020) 522-538.
106. Geometric and measure-theoretic shrinking targets in dynamical systems (with M. K. Roychowdhury), *Journal of Mathematical Analysis and Applications* 485, no. 1 (2020) 123769, 14 pages.
107. Differentiation on Orlicz spaces with rare bases of rectangles (with E. D'Aniello and L. Moonens), *Ann. Acad. Sci. Fenn. Math.* 45 (2020), no. 1, 411-427.
108. Existence and non-existence of solutions to the coboundary equation for measure-preserving systems (with T. Adams), to appear in *Ergodic Theory and Dynamical Systems*, preprint, 24 pages.
109. Uniform distribution on curves and quantization (with M. K. Roychowdhury), to appear in *Communications of the Korean Mathematical Society*, preprint, 15 pages.
110. Directional behavior of actions of  $Z^d$  (with A. Robinson and A. Sahin), preprint, 32 pages.
111. Moving averages (with T. Adams), preprint, 26 pages.
112. Good functions for translations (with A. Parrish), *New York J. Math.* 28 (2022) 884-916.
113. The zero set of an electrical field from a finite number of point charges: one, two, and three dimensions, Part I (with T. Erdelyi and R. Rosenblatt), preprint, 31 pages.
114. The zero set of an electrical field from a finite number of point charges: one, two, and three dimensions, Part II (with T. Erdelyi and R. Rosenblatt), preprint, 20 pages.
115. Generation of measures by statistics of rotations along sets of integers (with E. Lesigne, A. Quas, and M. Wierdl), preprint, 32 pages.
116. Almost everywhere convergence for Lebesgue differentiation processes along rectangles (with E. D'Aniello, A. Gauvan, and L. Moonens), preprint, 29 pages.
117. Optimal packing of triangles - an IGL project (with Z. Chen, K. Ding, Y. Huang, X. Jia, Y. Su, J. Xue), preprint 8 pages.
118. Traditional and alternative least squares approximations - an IGL project (with Z. Chen, K. Ding, Y. Huang, X. Jia, Y. Su, J. Xue), preprint 14 pages.

### III. Invited Talks

1. Kent State Functional Analysis Seminar, 1975, invited lecture.



2. University of Western Ontario, London, Ontario, 1975, invited lectures.
3. University of Oregon, Eugene, Oregon, invited to give a short talk during a special session on harmonic analysis, June 16-17, 1978.
4. University of Aberdeen, Scotland, invited lecture on invariant means while visiting Professor Alan Paterson, Summer, 1979.
5. Louisiana State University, Baton Rouge, invited colloquium, Summer 1980.
6. Oklahoma State University, Stillwater, invited colloquium, Fall 1980.
7. University of Wisconsin-Milwaukee, invited colloquium, Fall 1980.
8. University of Arkansas, invited colloquium Winter 1981.
9. University of Rochester, invited colloquium, Winter 1981.
10. University of Missouri, Columbia, invited colloquium, Winter 1981.
11. Syracuse University, invited colloquium, Winter 1981.
12. AMS Meeting, Pittsburgh, invited lecture in special session on harmonic analysis, Spring 1981.
13. Oklahoma State University, colloquium, Winter 1982.
14. Northwestern University, invited special lecture, Spring 1982.
15. University of Western Ontario, invited lecture at a special session on harmonic analysis on groups and semigroups, December 1984.
16. Kansas State University, colloquium and special lecture, Spring 1986.
17. Virginia Commonwealth University, colloquium, Spring 1986.
18. Northwestern University, colloquium, Spring 1986.
19. University of Alberta, colloquium, Summer 1987.
20. University of Missouri, Columbia, colloquium, Spring 1988.
21. First Conference on Almost Everywhere Convergence and Probability Theory, Spring 1988, OSU.
22. Oklahoma State University, colloquium, Fall, 1988.
23. Kansas State University, colloquium, Winter, 1989.
24. University of Oklahoma, invited hour address, principal speaker: A. Lubotsky, Spring, 1989.
25. Fifth Conference on Probability and Statistics, Vilnius, Lithuania, invited address, Summer, 1989.
26. Leningrad Office of the Steklov Institute of Mathematics, Leningrad, invited address, Summer, 1989.
27. Second Conference on Almost Everywhere Convergence and Probability Theory, Northwestern University, Fall 1989.
28. Kansas State University, Regional AMS meeting, invited talk in a special session on harmonic analysis and probability theory, Spring, 1990.
29. DePaul University/Northwestern University, special lectures, Winter, 1991.
30. MAA, Student Chapter, OSU, invited short talk, on Phase Retrieval, Spring, 1991.
31. Charles University, Prague, Czechoslovakia, invited talk, Fall, 1991.
32. University of Wroclaw, Mathematical Institute, invited address, conference on operators on groups, Karpacz, Poland, Fall, 1991.

33. University of North Carolina, Chapel Hill, invited talk at a workshop on almost everywhere convergence, November 7-11, 1991.
34. MSRI, Berkeley, California, February, 1992, address at workshop on Amenable Ergodic Theory.
35. University of New South Wales, Sydney, Australia, September, 1992, two talks in the Analysis Seminar Series.
36. University of Newcastle, Newcastle, Australia, September, 1992, one talk in the Analysis Seminar.
37. SUNY at Albany, Colloquium Talk, February, 1993.
38. Ohio State University, Conference on Convergence in Ergodic Theory and Probability, June, 1993, short talk.
39. University of Western Ontario, Colloquium, January, 1994.
40. University of Toronto, special seminar talk, January, 1994.
41. University of Florida, Gainesville, Colloquium talk, February, 1994.
42. University of South Florida, Tampa, Colloquium talk, February, 1994.
43. Kansas State University, Regional AMS meeting, invited talk in a special session on ergodic theory, March, 1994.
44. University of Illinois, Urbana-Champaign, Colloquium talk, March, 1994.
45. Mathematical Institute, University of Warwick, Coventry, England, visitor, August, 1994.
46. University of Zimbabwe, Harare, Zimbabwe, August, 1994, invited talks on ergodic theory.
47. Wabash Seminar, Conference talk, Wabash College, Indiana, December, 1994.
48. Ohio State University, Talk in Ergodic Theory and Probability Seminar, February, 1995.
49. University of Maryland, Departmental Colloquium, March, 1995.
50. DePaul University, Regional AMS meeting, invited talk in a special session on ergodic theory, March, 1995.
51. University of Illinois, Departmental Colloquium, Mathematics in Science and Society Series, Fall, 1995.
52. University of Memphis, Regional AMS meeting, invited talk in a special session on ergodic theory, March, 1997.
53. Ohio State University, Talk in the Ergodic Theory and Probability Seminar, May, 1997.
54. University of British Columbia, Special Address at the Conference in honor of the retirement of Edmond Granirer, August, 1997
55. Northwestern University, Special Address at the Conference on Probability, Ergodic Theory, and Analysis in honor of the retirement of Alexandra Bellow, October, 1997.
56. University of Florida, Gainesville, February, 1998, Departmental Colloquium.
57. Pennsylvania State University, University Park, seminars in the Statistics and Mathematics Department, March, 1998.
58. University of the Negev, Beer Sheva, Israel, Departmental Colloquium, May, 1998.
59. Hebrew University, Jerusalem, Israel, Ergodic Theory Seminar invited talk, May, 1998.
60. The Technion (Israel Institute of Technology), Haifa, Israel, Departmental Colloquium and a seminar talk, May, 1998.

61. DePaul University, Fall Regional Meeting of the AMS, Special Session on Ergodic Theory and Topological Dynamics, invited talk, September, 1998.
62. University of Maryland, dynamics seminar talk, Fall, 1998.
63. University of Illinois, Urbana-Champaign, Sectional Meeting of the AMS, March, 1999, invited talk in the session on Wavelets and Multiresolution, organized by Tian He.
64. Meeting of Chairs and Heads of Mathematics Departments, November, 1999, talk on Asynchronous Learning, Distance Education, and Programs at UIUC.
65. Northwestern University, plenary talk, Meeting on Stochastic Processes and Harmonic Analysis, June, 2000.
66. University of Memphis, special talk, meeting on ergodic theory and dynamical systems, April, 2001.
67. Purdue University, probability theory seminar, April, 2001.
68. Ohio State University, ergodic theory seminar, April, 2001.
69. University of Göttingen, plenary talk, workshop on non-hyperbolic dynamical systems, July, 2001.
70. Williams College, talk in the special session in ergodic theory, regional AMS meeting, October 2001.
71. Indiana University, Sectional Meeting of the AMS, invited talk in the special session on ergodic theory, April, 2003.
72. National Technical University of Athens, Athens, Greece, invited talk, September, 2003.
73. University of Crete, Crete, Greece, invited talks, October, 2003.
74. University of North Carolina, Chapel Hill, Sectional Meeting of the AMS, invited talk in the special session on ergodic theory, October, 2003.
75. University of Missouri, Columbia, analysis seminar, February, 2004.
76. Beijing University, Beijing, China, departmental colloquium, May, 2005.
77. Mathematics Institute, Chinese Academy of Sciences, Beijing, China, analysis seminar, May, 2005.
78. Harbin Institute of Technology, Harbin, Manchuria, China, departmental colloquium, May, 2005.
79. Shandong University, Jinan, China, departmental colloquium, May, 2005.
80. Shanghai Normal University, Shanghai, China, career planning talk, May, 2005.
81. University of Shanghai, Shanghai, China, May, 2005
82. University of Missouri, Columbia, analysis seminar, August, 2005.
83. Cornell University, Center for Applied Mathematics, Colloquium, November 2005.
84. DePaul University, Chicago, International Conference on Harmonic Analysis and Ergodic Theory, in Honor of Roger Jones and Marshall Ash, invited talk, December, 2005.
85. Regional meeting of the Canadian Mathematics Society, Victoria, BC, special session invited talk, December, 2005.
86. EU Conference on Harmonic Analysis, Zakopane, Poland, invited talk, January, 2006.
87. Wroclaw University, invited seminar talks, January, 2006.
88. University of Kentucky, Lexington, colloquium, March, 2006.
89. University of Louisville, colloquium, March, 2006.
90. Ohio State University, analysis seminar, March, 2006

91. Sectional meeting of the AMS, Cincinnati, Ohio, invited talk in the special session on ergodic theory, October 2006.
92. University of Maryland, dynamics seminar, November, 2006.
93. National meeting of the Canadian Mathematics Society, Toronto, special session invited talk, December, 2006.
94. February Fourier Talks, University of Maryland, program speaker, February, 2007.
95. University of Maryland, colloquium talk, March, 2007.
96. SUMIRFAS, Texas A&M University, invited talk, August, 2007.
97. Taiwan National University, Taipei, Taiwan, October 2007.
98. University of North Carolina, Chapel Hill, colloquium and opening talk for the 2008 Probability and Ergodic Theory Workshop, organized by Idris Assani, February, 2008.
99. Ohio State University, analysis seminar, February, 2008.
100. University of Notre Dame, colloquium, March, 2008.
101. Indiana University, analysis seminar, December, 2008.
102. Indiana University- Purdue University at Indianapolis, colloquium, December, 2008.
103. University of Alberta, Edmonton, plenary talk, Laifest, May, 2009.
104. Harmonic Analysis Workshop, Wayne State University, November 2009.
105. Analysis Seminar, University of East Anglia, Norwich, UK, January 2010.
106. Dynamical Systems Seminar, Imperial College, London, UK, January, 2010.
107. Denker Seminar, Pennsylvania State University, October, 2010.
108. Northwestern University, Dynamical Systems seminar, November, 2010.
109. Ohio State University, Analysis Seminar, February 2011.
110. George Washington University, Analysis Seminar, February, 2011.
111. Butler University, Colloquium, March 2011.
112. Oklahoma State University, Analysis Seminar, March 2011.
113. University of Memphis, Analysis Seminar, March 2011.
114. Conference on Ergodic Theorems, Group Actions, and Applications, Be'er Sheva University, Israel, May 2011.
115. Purdue University, Analysis seminar, October 2011.
116. George Washington University, Analysis seminar, November 2011.
117. George Washington University, Colloquium, November 2011
118. University of Memphis, Analysis seminar, April 2012.
119. University of Louvain la Neuve, Belgium, Analysis Seminar, August 2012
120. University of Louvain la Neuve, Belgium, Colloquium, August 2012
121. Ohio State University, Analysis Seminar, October, 2012
122. Sectional Meeting of the AMS, Akron, OH, Special Session on Separate Continuity vs. Joint Continuity, October, 2012
123. Ohio State University, Analysis Seminar, March, 2013

124. University of North Carolina, Chapel Hill, 2013 Probability and Ergodic Theory Workshop, organized by Idris Assani, March, 2013.
125. SUNY Albany, Analysis Seminar, July, 2013.
126. DePaul University, Colloquium, and Analysis Seminar, September, 2013.
127. University of Maryland, Dynamical Systems Seminar, October, 2013
128. George Washington University, Analysis Seminar, October, 2013
129. AMS Sectional Meeting, Louisville, Special Session on Ergodic Theory and Topological Dynamics, October, 2013.
130. UCLA, T. Tao Seminar, October, 2013.
131. UC Irvine, Analysis Seminar, October, 2013.
132. Special Session in Ergodic Theory and Symbolic Dynamics, AMS National Meeting, Baltimore, MD, January, 2014.
133. Special address on Mathematics Education from a Global Perspective, Fourah Bay College, Freetown, Sierra Leone, March 2014.
134. University of Toruń, Mathematical Department of the Nicolaus Copernicus University, Toruń, Poland, special talk in Meeting on Ergodic Theory and Dynamical Systems, May, 2014 .
135. Institute of the Polish Academy of Sciences, Wroclaw, Poland, seminar, May 2014
136. Institute of Mathematical Stochastics, Technical University of Dresden, Dresden, Germany, seminar, May 2014
137. Institute of the Polish Academy of Sciences, Warszawa, Poland, seminar, May 2014.
138. Ohio State University, Analysis Seminar, November, 2014
139. Special Session on Number Theory in Ergodic Theory and Dynamical Systems, AMS Sectional Meeting, George Washington University, March, 2015
140. Colloquium and Analysis Seminar, University of Missouri - Columbia, March, 2015.
141. Dynamical Systems, Ergodic theory, and Probability Conference in memory of Nikolai Chernov, University of Alabama, Birmingham, May 2015
142. Invited Talk, Ergodic Theory and Combinatorics Conference, University of Agder, Kristiansand, Norway, June 2015
143. Seminar, Université Paris-Sud, Orsay, June 2015
144. Seminar, Center for Computing Sciences, Bowie, MD, October 2016
145. February Fourier Talks, University of Maryland, Feb 16-20, invited participant
146. Colloquium speaker, Wright State University, April 14-15, 2017
147. Assani Workshop, invited speaker, April 21-23, 2017
148. Université Paris Sud, invited visitor and seminar speaker, May 7-26, 2017
149. AMS Sectional Meeting, Denton, TX, University of North Texas, invited speaker in a special session, September 8-11, 2017
150. Colloquium, Indiana University, October 18, 2017
151. Midwest Dynamical Systems meeting, Northwestern University, invited participant, November 3-5, 2017
152. February Fourier Talks, University of Maryland, February 15-18, 2018, invited participant

153. Invited visitor and seminar speaker, University of Memphis, March 12-16, 2018
154. Carolina Dynamics meeting, invited speaker, April 12-15, 2018
155. AMS Sectional Meeting, Northeastern University, invited speaker in a special session, April 20-23, 2018
156. University of Newcastle, Newcastle, Australia, invited visitor, colloquium, May 13-26, 2018
157. University of Technology Sydney, invited seminar, May 23, 2018.
158. University of New South Wales, invited seminar speaker, May 25, 2018
159. Leeds University, Analysis Seminar, May 2019.
160. University of Campania Luigi Vanvitelli, Caserta, Analysis Colloquium, May 2019.
161. Texas A & M University, College Station, 2022 SUMIRFAS, July 29-31, 2022..

#### **IV. Administrative Experience and University Service**

##### **A. Indiana University-Purdue University Indianapolis (IUPUI)**

###### **School of Science**

1. Member of Dean's Chairs Council (July, 2014-September, 2016).

###### **Department of Mathematical Sciences**

1. Chair of the Department of Mathematical Sciences (July, 2014-September, 2016)
2. Member of Promotion and Tenure Committee, Ex-Officio (non-voting) July, 2014-September, 2016
3. Member of the Undergraduate Affairs Committee, AY 2017-2018.

##### **B. University of Illinois at Urbana-Champaign (U of I)**

###### **University Wide**

1. Member of the Faculty Senate (2014-2016)
2. Graduate College Executive Committee (2012-2014)
3. Research Board (2010-2013)
4. Provost Search Committee (2009-2010)
5. Provost's Tenure and Promotion Committee (2009-2011).
6. Member of the Computational Science and Engineering (CSE) Steering Committee (2000-2004). This committee advises the head of the CSE program. It also awards fellowships to graduate students pursuing interdisciplinary research. CSE is an active interdisciplinary group of faculty from many departments at UIUC with shared interests in computational science.
7. Member of the Coordinating Committee of the Beckman Institute (1999-2004). This committee advises the director of the Beckman Institute, one of the world's foremost interdisciplinary research institutes with approximately 600 researchers from a variety of disciplines.
8. Member of the International Programs and Studies (IPS) Executive Advisory Committee, the International Council. This group advising the Director of IPS on policy, long-range planning, and allocation of funds for visitors and appointments that are related to international issues at UIUC.

9. Member of the Graduate College's Graduate Fellowship Executive Committee, and area chair for that committee. This committee oversees the granting of fellowships and grants to graduate students at UIUC. The committee reviews applications, critiques the budgets, and makes recommendations to the Dean of the Graduate College with regards to which students should get funding, and what the level of the funding should be.

### **College**

1. LAS Committee on Committees (2004-2006). This committee is responsible for staffing a large group of the standing LAS committees.
2. Executive Committee (1998-2000). This is the central committee that advises the dean of the College of Liberal Arts and Sciences (LAS) on all aspects of policy decisions, hiring, and promotion and tenure. LAS is comprised of 52 departments and about 577 faculty members.
3. Curriculum Committee (1997). This committee oversees all changes in and additions to the curriculum of the College of Liberal Arts and Sciences.

### **Department**

1. Promotion and Tenure Committee (2012-2015), Chair (2013-2014)
2. Affirmative Action Officer (2010-2011)
3. Member of Grievance Committee (2010-2012)
4. Online Education Committee, Chair (2008-2010)
5. Analysis Area Chair (2004-2005).
6. Coordinator of the NSF VIGRE program, 2000-2006. VIGRE is short for Vertical Integration of Research and Education; it is a new NSF program designed to promote communication across all levels of the student and faculty population in mathematics departments. This multi-million dollar grant from NSF funds graduate fellowships, postdoctoral positions, research experiences for undergraduate students, and a wide array of collaborative activities that involve faculty members, postdoctoral fellows, graduate students, and undergraduate students. The majority of the Department of Mathematics faculty and graduate students are involved in some aspect of this program. The Coordinator of the NSF VIGRE program promotes the program, monitors the existing programs within the VIGRE grant, develops and organizes new activities under this program, supervises the use of the NSF funds provided for the VIGRE program, and prepares the annual reports on the program that are sent in to NSF.
7. Chair of the Department of Mathematics (7/99 to 7/04), and Acting Chair of the Department of Mathematics (3/06 to 8/06). The Department of Mathematics at UIUC is one of the largest and most successful research and teaching mathematics departments in the world. It has about 100 faculty members (counting regular faculty and postdoctoral faculty members) and over 200 graduate students. Each year, the department teaches mathematics of all kinds and at all levels to over 10,000 undergraduate students. The Chair of the Department of Mathematics is responsible for the overall management of the department. This includes every aspect of the management of the department: all budgetary issues, hiring of faculty and staff, faculty promotion and tenure decisions, graduate and undergraduate student admissions, instructional delivery, curriculum development, committee assignments, and development activities.
8. Executive Committee (1996-1998, 2008-20010). This committee is the core advisory committee that participates with the chair of the department in the governance of the Department of Mathematics. It deals very broadly with issues of hiring and budget management.
9. Mathematics in Science and Society Committee (1998-1999) This committee organizes a series of interdisciplinary lectures that brings scientists and mathematicians from around the world to UIUC to present their work and to set this work in context for science and society in the large.

10. Committee on Mathematics and Applications (1997-1999) This interdepartmental committee advises the Department of Mathematics on interdisciplinary and applied mathematics course offerings, curriculum development, and hiring.
11. Undergraduate Affairs (1995-1996). This committee oversees all of the undergraduate courses and programs.

### **C. Ohio State University**

#### **College**

1. Departmental Representative to the Arts and Sciences Honors Committee, 1991-1995
2. Member of the College Long Range Planning Committee 1989-1990

#### **Department**

1. Member of the new Ph.D. Qualifying Exam Committee twice, and Chair of this committee, January, 1991
2. Member of the old Complex Analysis Exam Committee 9 times
3. Member of the old Real Analysis Proficiency, Exam Committee 13 times
4. Member of the old Masters Exam in Analysis Committee 10 times
5. Member of the Library Committee for 1985-1988
6. Member of the Promotion and Tenure Committee (CENT) for three years, Chair of CENT during the year 1988-89
7. Member of the Undergraduate Honors Committee, 1989-1994
8. Chair of the Undergraduate Committee, 1991-1994
9. Member of the Undergraduate Committee 1986-1988, acting chair of this committee during Spring, 1988
10. Member of the Graduate Committee 1983-1985

### **D. Other Service and Professional Activities**

1. Grader for the Putnam Exam, Spring 2017, Spring 2018
2. Member of the Board of Directors of the Illinois Section of the Mathematical Association of America, 2003-2006
3. Editor for the Illinois Journal of Mathematics, 1998-2006
4. Editor for the New York Mathematics Journal, a fully electronic journal published by SUNY at Albany, from inception in 1994 until 2019
5. Member of the NSF Panel to review FRG proposals, 1999
6. Member of NSF Panel to review grants for Modern Analysis, Dynamical Systems, April, 1996
7. Joint organizer (with Vitaly Bergelson and Peter March) of an international conference on Convergence in Ergodic Theory and Probability, June, 1993, at Ohio State University
8. Twice organized a special session in Ergodic Theory at the Midwest Regional meeting of the American Math Society at Kansas State University in Manhattan, Kansas, in 1990 and 1994
9. Co-organizer with Alica Miller of a special session in Topological Dynamics and Ergodic Theory, AMS National Meeting, Phoenix, Arizona 2004



10. Reviewer for Math Reviews and referee for NSF proposals for the sections on probability theory, classical analysis, and modern analysis
11. Referee for many journals including Transactions AMS, Proceedings AMS, Monographs AMS, Illinois Journal of Math, Pacific Journal of Math, Math Annalen, Journal of the London Math Society, Aequationes mathematicae, Journal of Mathematical Physics, etc.
12. Pi Mu Epsilon advisor for 3 years at OSU

## V. Contributions to Teaching

### A. Postdoctoral Students

I have helped mentor a number of postdoctoral students over the years, at Ohio State University and the University of Illinois in particular. I have been the direct supervisor of five postdoctoral students. They are as follows:

**Andy Parrish**, 2010-2013. He is now a tenure-track Assistant Professor at Eastern Illinois University.

**Laurent Moonens**, 2011-2012. He is now at the University of Paris-Sud XI in Orsay in a permanent position.

**Karen Shuman**, 2001-2003. She is now a tenured associate professor of mathematics at Grinnell College.

**Alica Miller**, 2003-2005. She is now a tenured associate professor of mathematics at the University of Louisville.

**Zhuocheng Yang**, 1988-1990. He is now a teacher in Chicago, Illinois.

### B. Graduate Students

Fourteen graduate students have completed their Ph.D. degrees while working with me. These students and their current positions are as follows:

**Karin Reinhold**, Ph.D. in 1991 at Ohio State University, tenured associate professor of mathematics at SUNY Albany

**Peter Schwartz**, Ph.D. in 1994 at Ohio State University, a staff scientist at the Lawrence Berkeley National Laboratory in Berkeley, California

**Guodong Li**, Ph.D. in 1994 at Ohio State University, Fellow of the Society of Actuaries, Associate Principal, Reviewing Actuary at Buck Consultants Inc, St. Louis, Missouri

**Bryan Johnson**, Ph.D. in 1997 at Ohio State University, fixed income analyst at the Alaska Permanent Dividend Fund, Juneau, Alaska.

**Luis Galup**, Ph.D. in 1997 at Ohio State University, after working at GE Research for some years is now an independent consultant in New York City.

**Sakin Demir**, Ph.D. in 1999 at UIUC, privately employed.

**Todd Retzlaff**, Ph.D. in 2000 at UIUC, tenured associate professor of mathematics at the Berks-Lehigh Valley College of the Pennsylvania State University.

**Georgios Argiris**, Ph.D. in 2001 at UIUC, financial analyst in London, England.

**Jantana Ayaragarnchanakul**, Ph.D. in 2001 at UIUC, tenured associate professor of mathematics at the Prince of Songkla University, Thailand.

**Nader Goubran**, Ph.D. in 2002 at UIUC, teacher in New York City.

**Parthena Avramidou**, Ph.D. in 2003 at UIUC, mathematics teacher at Buckingham College School in Harrow, Middlesex, England.

**Ciprian Demeter**, Ph.D. in 2004 at UIUC, tenured associate professor of mathematics at Indiana University, Bloomington.

**Chaoyuan Liu**, Ph. D. in 2005 at UIUC, tenured associate professor of mathematics at Eastern Kentucky University.

**Kelly Yancey**, PhD in 2013 at UIUC, postdoctoral fellow at the University of Maryland, College Park.

### C. Undergraduate and Graduate Teaching

There is a long list below of courses taught to graduate students and undergraduate students at the institutions where Joseph Rosenblatt was a faculty member. While most summers were spent doing research, there have recently been exceptions. In the summer of 2005, Rosenblatt supervised a group of students studying inverse problems, work that was funded by an NSF REU Site Grant. Then in recent years (2017, 2018, 2019) Joseph Rosenblatt was a member of the SCAMP Program at the IDA Center for Computing Sciences, Bowie, MD.

**Key:** • H means an Undergraduate Honors Course

- C&M means a Calculus&Mathematica course
- AL means Active Learning (small group instruction as in Harvard calculus)
- ARD means Assigned Research Duty
- ASRM means Actuarial Science and Risk Management

#### Subjects with Course Numbers for Courses Taught

Precalculus: 104, 130, 18

Calculus: 120, 130, 131, 132, 151, 152, 166, 153, 190, 191, 201, 230, 242, 261, 266, 263X, 264

Differential Equations: 255, 256, 285, 291, 304, 415, 441, 521

Linear Algebra: 171, 225, 290, 315, 406, 415, 471, 520, 568, 569

Complex Variables: 292, 416, 446, 522, 653A

Introduction to Theoretical Mathematics: 345, 367

Advanced Calculus: 384

Probability Theory: 361, 461

Advanced Geometry: 507

Introductory Graduate Level Real Analysis: 441, 544, 651, 652, 653

Advanced Graduate Level Real Analysis: 750, 751, 752, 959

Harmonic Analysis: 448

Ergodic Theory: 468, 595, 667, 931

Functional Analysis: 857, 858, 859

Courses marked with an asterisk \* had teaching evaluations conducted. Courses not marked Lec (lecture) or Rec (recitation) are individually taught sections.

Quarter	Course (Class Size)	Course (Class Size)
Fall 1974	H151 Rec (9)	153 (29)
Winter 1975	H152 Rec (11)	255 (23)

Spring 1975	H153 Rec (10)	180 Lec (92 - 6 Rec)
Summer 1975	ARD	
Fall 1975	750 Rec (33)	959 (10)
Winter 1976	255* (30)	ARD
Spring 1976	752 Rec (20)	653A (6)
Summer 1976	NSF support for research	
Fall 1976	471 (24)	651 Rec (14)
Winter 1977	256 (25)	652 Rec (13)
Spring 1977	153* (36)	653A Rec (16)
Summer 1977	ARD	
Fall 1977	H151* (27)	131 Lec (71 - 4 Rec)
Winter 1978	H152* (23)	132 Lec (93 - 4 Rec)
Spring 1978	653A* (15)	H263* (19)
Summer 1978	NSF support for research	
Fall 1978	130 Lec (175 - 6 Rec)	857 (7)
Winter 1979	131 Lec (175 - 6 Rec)	858 (5)
Spring 1979	132 Lec (160 - 6 Rec)	859 (5)
Summer 1979	ARD	
Fall 1979	415 (30)	651Rec (13)
Winter 1980	471 (29)	652Rec (11)
Spring 1980	653A (9)	653Rec (6)
Summer 1980	NSF support for research	
Fall 1980	152*Lec (53 - 2 Rec)	651*Lec (26 Rec)
Winter 1981	151 Lec (46 - 2 Rec)	652 Lec (18)
Spring 1981	ARD	653 Lec (18)
Summer 1981	NSF support for research	
Term 1 1981	201* (27)	304 (17)
Term 2 1982	201 (25)	304 (23)
Summer 1982	NSF support for research	
Fall 1983	416* (60)	153*Lec (69 - 2 Rec)
Winter 1983	H191 (10)	ARD
Spring 1983	H263X (21)	ARD
Summer 1983	NSF support for research	
Fall 1983	416* (60)	153*Lec (69 - 2 Rec)
Winter 1984	ARD	ARD
Spring 1984	568* (21)	151 Lec (126 - 4 Rec)
Summer 1984	NSF support for research	
Fall 1984	H290 (14)	ARD
Winter 1985	H291 (22)	ARD
Spring 1985	H292* (19)	ARD
Summer 1985	NSF support for research	
Fall 1985	651 Lec (52 - 3 Rec)	651 Rec (25)
Winter 1986	652 Lec (46 - 2 Rec)	ARD
Spring 1986	653* Lec (22 - 2 Rec)	151 Lec (85 - 4 Rec)

Summer 1986	NSF support for research	
Fall 1986	931* (12)	104 Coordinator
Winter 1987	ARD	104 Coordinator
Spring 1987	H294* (8)	104 Coordinator
Summer 1987	NSF support for research	
Fall 1987	931 (7)	104 Coordinator
Winter 1988	ARD	104 Coordinator
Spring 1988	ARD	104 Coordinator
Summer 1988	NSF support for research	104 Coordinator
Fall 1988	507 (18)	ARD
Winter 1989	H540 (13)	ARD
Spring 1989	H541* (7)	ARD
Summer 1989	NSF support for research	
Fall 1989	857 (10)	153 (30)
Winter 1990	858 (8)	ARD
Spring 1990	859* (8)	ARD
Summer 1990	NSF support for research	
Fall 1990	651 Lec (31 - 2 Rec)	ARD
Winter 1991	652 Lec (31 - 2 Rec)	931 (6)
Spring 1991	653 Lec (31 - 2 Rec)	ARD
Summer 1991	NSF support for research	
Fall 1991	H520 (18)	ARD
Winter 1992	H521 (14)	ARD
Spring 1992	H522* (14)	ARD
Summer 1992	NSF support for research	
Fall 1992	750 Lec (15)	ARD
Winter 1993	751 Lec (15)	ARD
Spring 1993	752 Lec (15)	ARD
Summer 1993	NSF support for research	
Fall 1993	H190* (15)	931 (7)
Winter 1994	ARD	ARD
Spring 1994	345 (23)	ARD
Summer 1994	NSF support for research	
Fall 1994	285* (69)	315* (28)
Spring 1995	130 (35)	361 (25)
Summer 1995	Reading Course (1) NSF support for research	
Fall 1995	468* (15)	384* (20)
Spring 1996	416 (13)	C&M130 (19)
Summer 1996	NSF support for research	
Fall 1996	448* (17)	C&M120* (18)
Spring 1997	461 (13)	C&M242 (27)
Summer 1997	NSF support for research	

Fall 1997	441* (20)	C&M285* (20)
Spring 1998	468 (12)	AL 130 (15)
Summer 1998	Reading Course, 2 students NSF support for research	
Fall 1998	Second Discipline Fellowship	
Spring 1999	Second Discipline Fellowship	
Summer 1999	NSF support for research	
Fall 1999	Chair-released from teaching	
Spring 2000	Chair-released from teaching	
Summer 2000	Chair-released from teaching	
Fall 2000	Chair-released from teaching	
Spring 2001	Chair-released from teaching	
Summer 2001	Chair-released from teaching	
Fall 2001	Chair-released from teaching	
Spring 2002	Chair-released from teaching	
Summer 2002	Chair-released from teaching	
Fall 2002	Chair-released from teaching	
Spring 2003	Chair-released from teaching	
Summer 2003	Chair-released from teaching	
Fall 2003	Chair-released from teaching	
Spring 2004	Chair-released from teaching	
Summer 2004	Chair-released from teaching	
Fall 2004	347 (22)	242 (29)
Spring 2005	230 Lec (180)	230 Rec (30)
Summer 2005	Small Group REU on Inverse Problems (6)	
Fall 2005	Sabbatical	
Spring 2006	Research appointment/Interim Chair	
Summer 2006	Interim Chair-released from teaching	
Fall 2006	Program Director NSF	
Spring 2007	Program Director NSF	
Summer 2007	Program Director NSF	
Fall 2007	Program Director NSF	
Spring 2008	Program Director NSF	
Summer 2008	Program Director NSF	
Fall 2008	595 (10)	
Spring 2009	H231 (23)	220 Lec (230)
Summer 2009	Visiting at University of Maryland	
Summer 2009	NSF support for research	
Fall 2009	415 (75)	
Spring 2010	225 (58)	448 (23)
Summer 2010	NSF support for research	

Fall 2010	225 (64)	
Spring 2011	241 (198)	
Summer 2011	NSF support for research	
Fall 2011	225 (95)	221 (250)
Spring 2012	Sabbatical	
Summer 2012	Independent research	
Fall 2012	441 (28)	441 (26)
Spring 2013	466 (30)	
Summer 2013	Independent research	
Fall 2013	Administration and research	
Spring 2014	595 (13)	H241 (23)
Summer 2014	Administration and independent research	
Fall 2014	667 (5)	
Spring 2015	171 (46)	
Summer 2015	Administration and independent research	
Fall 2015	544 (9)	
Spring 2016	166 (45)	
Summer 2016	Administration and independent research	
Fall 2016	261 (41)	
Spring 2017	166 (44)	Optimization Course (1)
Summer 2017	SCAMP at IDA/CCS	
Fall 2017	261 (33)	171 (27)
Spring 2018	166 (45)	171 s (44)
Summer 2018	SCAMP at IDA/CCS	
Fall 2018	261(48)	171 (39)
Spring 2019	261 (43)	166 (51)
Summer 2019	SCAMP at IDA/CCS	
Fall 2020	ASRM 406 (75) - Online at UIUC using Zoom and Moodle	
Spring 2021	ASRM 406 (42) - Online at UIUC using Zoom and Moodle	
Fall 2021	Illinois Geometry Lab (IGL) Project (5 UGs, 1 Grad)	
Fall 2021	ASRM 406 (42) - Online at UIUC using Zoom and Moodle	
Spring 2022	Illinois Geometry Lab (IGL) Project (5 UGs, 1 Grad)	