

February 8, 2013, Curriculum Vitae

Jane Piore Gilman
Professor of Mathematics
Rutgers University, Newark

Contact Information

Department of Mathematics & Computer Science
Rutgers University
Newark, New Jersey 07102
(973) 535-3914
e-mail: gilman@rutgers.edu

Education

B.S., University of Chicago, December 1965
Ph.D., Columbia University, May 1971

Employment¹

2010 - present	Professor II	Department of Mathematics, Rutgers-Newark
1984 - 2010	Professor I	Department of Mathematics, Rutgers-Newark
1977 - 1984	Associate Professor	Department of Mathematics, Rutgers-Newark
1972 - 1977	Assistant Professor	Department of Mathematics, Rutgers-Newark
1971 - 1972	Instructor	Department of Mathematics, SUNY Stony Brook

Supported Visiting Positions

F 2103	Member	ICERM, Brown University
9/08 - 9/11	Analysis Program Officer	National Science Foundation
7/06 - 12/06	Visiting Fellow	Yale University
10/95-12/95	Member	Institutes des Hautes Études Scientifiques
1993 (4 weeks)	Visitor	University of Warwick
1/92 - 6/92	Member	Institute for Advanced Study
1990 - 1991	Visiting Professor	Princeton University
1989 (4 weeks)	Member	Mittag-Leffler Institute, Sweden
1988 - 1989	Visiting Mathematician	Princeton University
1/86 - 6/86	Member	Mathematical Sciences Research Institute
1979 - 1980	Member	Institute for Advanced Study

Chair, Rutgers Newark, Department of Mathematics, 1982-90

Fields of Interest Kleinian groups, Teichmüller theory, mapping-class groups, hyperbolic geometry including computational aspects, combinatorial group theory and dynamical systems.

¹Professor II is a distinguished professor rank

Honors and Awards

- National Science Foundation Interdepartmental Agency (IPA) Grant to Rutgers, 2008-2011
- National Science Foundation conference grant, PI, 2008-2009.
- Rutgers University Research Council Colloquium grant, 2007-8.
- Rutgers University Research Council grant, 2006-7.
- Sigma Xi, Distinguished Lecturer, 2001-2002 and 2002-2003.
- National Security Agency research grant, PI, 2003-2005.
- Rutgers University Research Council grant, 2001-2.
- National Science Foundation research grant, PI, AY support, 1994-96.
- Competitive Fellowship Leave, Rutgers University 1994-96.
- National Science Foundation research grant, PI, 1990-92.
- Rutgers University Dialogues Pilot Project curriculum grant, S 1994.
- Rutgers University Competitive Fellowship leave, S 1986.
- Rutgers University Council for Instructional Development grant, 1981-82.
- National Science Foundation research support Summer 1972.
- Columbia University Graduate Fellowship, 1966-70.

Doctoral Students²

1. Yicheng Jiang, *Complexity of the Fuchsian Group Discreteness Algorithm*, January 2000, thesis published in *Ann. Acad. Sci. Fenn.* **26** (2001) 375-390; current position: industry.
2. Vidur Malik, *Curves Generated on Surfaces by the Gilman-Maskit Algorithm*, May 2007, Awarded Dissertation Fellowship by the Graduate School-Newark for 2006-07; thesis published in *AMS-CONM* **510**, post-doc: Visiting Assistant Professor, Mathematics Department, University of Cincinnati, current position: teaching in India.
3. Karan Puri, *Factorization of Isometries of Hyperbolic 4-Space and a Discreteness Condition*, May 2009. Awarded Dissertation fellowship by the Graduate School-Newark for 2008-09; thesis published in *PAMS*, joint paper with A. Basmajian, current position: tenure track Assistant Professor, Queensborough Community College, CUNY.
4. Andrew Silverio, current student F 2008 - to present. Awarded 2012-2013 Dissertation Fellowship by RN Graduate School.

²The doctoral program in mathematics at Rutgers-Newark began in 1995. Yicheng Jiang was the first to complete the program.

Doctoral Student Co-Advised with Denis Blackmore of NJIT

5. Chengwen Wang, *On the Periodic Solutions for Asymptotically Nonlinear Hamiltonian Systems*, May 2000, thesis published in *Int. J. of Differential Equations*, 7 (2003), no. 3, 295-309. Current position: Associate Professor, Essex County College, Newark, NJ.

Post-doctoral visitors

6. Yoshihide Okumura of Kanazawa University, Japan, six weeks, S 97, supported by the Japanese government. Current position: Associate Professor, Faculty of Science, Shizuoka University, Japan.
7. Moira Chas, University of Barcelona, six weeks, F 97 supported by Spanish government. Current Position: Visiting Professor, SUNY Stony Brook.

PUBLICATIONS**Refereed Research Articles**

1. Compact Riemann Surfaces with Conformal Involutions, *Proceedings Amer Math Soc* **37** (1973), 105-107. http://andromeda.rutgers.edu/~gilman/publications/1_Compact.pdf
2. On the Moduli of Compact Riemann Surfaces with a Finite Number of Punctures in *Discontinuous Groups and Riemann Surfaces*, *Annals of Math Studies* **79** (1974), 181-205. http://andromeda.rutgers.edu/~gilman/publications/2_Moduli.pdf
3. On Conjugacy Classes in the Teichmüller Modular Group, *Michigan Math J.* **23** (1976), 53-63. http://andromeda.rutgers.edu/~gilman/publications/3_Conjugacy.pdf
4. A Matrix Representation for Automorphisms of Riemann Surfaces, *Linear Algebra and its Applications* **17** (1977), 139-147. http://andromeda.rutgers.edu/~gilman/publications/4_matrix.pdf
5. An Example about Normalizers in Mapping-class Groups, *Proceedings Amer Math Soc* **69** (1978), 138-147. http://andromeda.rutgers.edu/~gilman/publications/5_Example.pdf
6. Intersection Matrices for Adapted Bases (with David Patterson) in *Riemann Surfaces and Related Topics*, *Annals of Math. Studies* **97** (1981), 149-166. http://andromeda.rutgers.edu/~gilman/publications/6_Matrix.pdf
7. A Remark about Components of Relative Teichmüller Spaces, *Canadian Math Bulletin* **24** (1981), 245-6. http://andromeda.rutgers.edu/~gilman/publications/7_Remark.pdf
8. On the Nielsen Type and the Classification of the Mapping Class Group, *Advances in Math* **40** (1981), 68-96. http://andromeda.rutgers.edu/~gilman/publications/8_Nielsen.pdf

-continued

Refereed Research Articles -continued-

9. Determining Thurston Classes Using Nielsen Types, *Transactions Amer Math Soc* **272** (1982), 669-675. http://andromeda.rutgers.edu/~gilman/publications/9_Determining.pdf
10. Structures of Elliptic Irreducible Subgroups of the Mapping Class Group, *Proceedings London Math Soc* **47** (1983), 27-42. http://andromeda.rutgers.edu/~gilman/publications/10_Structures.pdf
11. On the Existence of Cyclic Surface Kernels for Pairs of Fuchsian Groups (with Robert Gilman), *Journal London Math Soc* **30** (1984), 451-464. http://andromeda.rutgers.edu/~gilman/publications/11_On_the_Existence_of_Cyclic_Surface_Kernels_for_Pairs_of_Fuchsian_Groups.pdf
12. A Characterization of Finite Subgroups of the Mapping-class Group, in *Proceedings 1985 Alta Conference*, Annals of Math Studies (1987), 433-442. http://andromeda.rutgers.edu/~gilman/publications/12_A_Characterization_of_Finite_Subgroups_of_the_Mapping-class_Group.pdf
13. A Geometric Approach to the Hyperbolic Jørgensen Inequality, *Bulletin Amer Math Soc* **16** (1987), 91-92. http://andromeda.rutgers.edu/~gilman/publications/13_Geometric.pdf
14. Inequalities in Discrete Subgroups of $PSL(2, \mathbb{R})$, *Canadian Journal* **40** (1988), 115-130. http://andromeda.rutgers.edu/~gilman/publications/14_Inequalities.pdf
15. On the Existence of Elliptic Elements in Discrete Groups in *Holomorphic Functions and Moduli, II* Springer-Verlag, N.Y. (1988), 23-27. http://andromeda.rutgers.edu/~gilman/publications/15_On_the_Existence_of_Elliptic_Elements_in_Discrete_Groups.pdf
16. A Geometric Approach to Jørgensen's Inequality, *Advances in Math* **85** (1991), 193-197. http://andromeda.rutgers.edu/~gilman/publications/16_Geometric.pdf
17. An Algorithm for Two-generator Discrete Groups (with Bernard Maskit), *Michigan Math J* **38** (1991), 13-32. http://andromeda.rutgers.edu/~gilman/publications/17_Algorithm.pdf
18. Recent Developments in Nielsen Theory and Discrete Groups, in *Nielsen Theory and Dynamical Systems*, AMS CONM **152** (1993), 159-176. http://andromeda.rutgers.edu/~gilman/publications/18_Recent_Developments_in_Nielsen_Theory_and_Discrete_Groups.pdf
19. Two-generator Discrete Subgroups of $PSL(2, \mathbb{R})$, *Memoirs of the Amer Math Soc* **117**, (1995), volume 561 (200 pages). [http://andromeda.rutgers.edu/~gilman/publications/19_Two-generator_Discrete_Subgroups_of_PSL\(2,R\).pdf](http://andromeda.rutgers.edu/~gilman/publications/19_Two-generator_Discrete_Subgroups_of_PSL(2,R).pdf)
20. Algorithms, Complexity and Discreteness Criteria in $PSL(2, \mathbb{C})$, *Journal D'Analyse Mathématique* **73** (1997), 91-114. http://andromeda.rutgers.edu/~gilman/publications/20_Algorithms.pdf

-continued

Refereed Research Articles -continued-

21. A Discreteness Condition for Subgroups of $PSL(2, \mathbb{C})$ in *Proceedings of the Bers Colloquium*, AMS CONM **211** (1997), 261-267. <http://andromeda.rutgers.edu/~gilman/publications>.
22. Complexity of a Turing Machine Discreteness Algorithm in *The Tradition of Ahlfors and Bers, Proceedings AB98 Colloquium* AMS CONM **256** (2000), 165-171. http://andromeda.rutgers.edu/~gilman/publications/22_Complexity.pdf.
23. Kleinian Groups with Real Parameters, (with F.W. Gehring and G.M. Martin), *Communications in Contemporary Math* **3** (2001), 1-23. http://andromeda.rutgers.edu/~gilman/publications/23_Kleinian.pdf.
24. Alternate Discreteness Tests, in *Birman Conference Proceedings* AMS/IP Studies in Advanced Mathematics **24**, (2001), 41-47. http://andromeda.rutgers.edu/~gilman/publications/24_Alternate.pdf.
25. Word Sequence and Intersection Numbers (with Linda Keen) in *Complex Manifolds and Hyperbolic Geometry (Guanajuato 2001)*, AMS CONM **311** (2002), 331-349. http://andromeda.rutgers.edu/~gilman/publications/25_WordSequence.pdf.
26. The Geometry of Two-Generator Groups: Hyperelliptic Handlebodies (with Linda Keen), *Geometriae Dedicata*, **110** (2005), 159-190. http://andromeda.rutgers.edu/~gilman/publications/26_Geometry.pdf.
27. Boundaries for Two-Parabolic Schottky Groups, in *Spaces of Kleinian Groups*, London Math. Soc. Lecture Notes **329**(2005), 283-299. http://andromeda.rutgers.edu/~gilman/publications/27_Boundaries.pdf.
28. Planar Families of Discrete Groups (with Linda Keen) in *The Geometry of Riemann Surfaces and Abelian Varieties*, AMS CONM **397** (2006), 79-88. http://andromeda.rutgers.edu/~gilman/publications/28_PlanarFamilies.pdf.
29. Classical Two-Parabolic T -Schottky Groups (with Peter Waterman), *Journal D'Analyse Mathematiques* **98** (2006), 1-42. http://andromeda.rutgers.edu/~gilman/publications/29_Classical.pdf.
30. Informative Words and Discreteness in *Proc. Rosenbergerfest*, AMS CONM **421**, (2007) 147-155. http://andromeda.rutgers.edu/~gilman/publications/30_Informative.pdf.
31. Canonical Symplectic Representations for Prime Order Conjugacy Classes of the Mapping Class Group, *Journal of Algebra*, **318** (2007), 430-455. http://andromeda.rutgers.edu/~gilman/publications/31_Canonical.pdf.
32. The Structure of Two-Parabolic Space: Parabolic Dust and Iteration, *Geometriae Dedicata* **131** (2008), 27-48. http://andromeda.rutgers.edu/~gilman/publications/32_Structure.pdf.

-continued

Refereed Research Articles -continued-

33. Prime Order Automorphisms of Riemann surfaces, in *Proceedings of the International Workshop on Teichmüller Theory and Moduli Problems*, HRI Lecture Notes Series, Ramanujan Mathematical Society, **10** (2009), 229-246. http://andromeda.rutgers.edu/~gilman/publications/33_prime_order_automorphisms_of_riemann_surfaces.pdf
34. Cutting Sequences and Palindromes (with Linda Keen), in *Geometry of Riemann Surfaces* London Math Soc Lecture Note Series volume 368, (2009) 24 pages. http://andromeda.rutgers.edu/~gilman/publications/34_cutting_sequences_and_palindromes.pdf
35. Discreteness Criteria and the Hyperbolic Geometry of Palindromes, (with Linda Keen), *Journal of Conformal Geometry and Dynamics* **13** (2009), 76-90. http://andromeda.rutgers.edu/~gilman/publications/35_discreteness_criteria_and_the_hyperbolic_geometry_of_palindromes.pdf
36. Enumerating Palindromes in Rank Two Free Groups (with Linda Keen), *Journal of Algebra*, (2011) 1-13. http://andromeda.rutgers.edu/~gilman/publications/36_enumerating_palindromes_in_rank_two_free_groups.pdf
37. Lifting Free Subgroups of $PSL(2, R)$ to Free Groups (with Linda Keen), *AMS CON Math*, **575** (2012), 109-122. <http://andromeda.rutgers.edu/publications/Cliff.pdf>
38. The Non-Euclidean Euclidean Algorithm (submitted to *Advances in Mathematics* undergoing requested revision) <http://andromeda.rutgers.edu/~gilman/publications/NEEpost.pdf>

Articles in Preparation

39. On Yamamoto's Example of a Classical Schottky Group, (abstract page 6 of link) http://andromeda.rutgers.edu/~gilman/publications/39_yamamoto.pdf
40. Adapted Homology Bases for Arbitrary Conformal Automorphism Groups of Compact Riemann Surfaces-results presented in 2012 CUNY Complex Analysis seminar and January 2013 AMS special session.
41. Equations for Schottky groups (with Peter Waterman)
42. Palindromes and the core sequence (with L. Keen)-results to be presented in CUNY Topology & Geometry seminar, May 7, 2013 and CUNY Complex Analysis seminar S 2013.

Book Reviews

43. Review of *Surfaces and Planar Discontinuous Groups* by Zieschang, Vogt and Caldeway, *Springer Lecture Notes in Math.* **835**. Reviewed for *the Bulletin of the Amer Math Soc* **9** (2), (1983), 256-9. http://andromeda.rutgers.edu/~gilman/publications/40_BAMS.pdf
44. Review of *Collected Mathematical Papers of Jacob Nielsen*, edited by Vagn Lundsgaard Hansen, Birkhauser (1986). Reviewed for *the Bulletin of the Amer Math Soc* **21**, (1989) 125-129. http://andromeda.rutgers.edu/~gilman/publications/41_Nielsen.pdf

Graduate Textbooks

45. *Complex Analysis in the Spirit of Lipman Bers*, graduate text (with I. Kra and R. Rodriguez), Springer-Verlag, Graduate Texts in Mathematics Series **245** (2007). (Second edition, in press, should appear Fall 2012 or S 2013)
46. *Advanced Topics in Complex Analysis and Hyperbolic Geometry*, Graduate text, in preparation.

Other Publications

47. Report on Geometry and the Imagination, CBMS Issues in Mathematics Education, **3**, AMS, Providence, Rhode Island, (1993), 131-135. http://andromeda.rutgers.edu/~gilman/publications/47_Bers.pdf
48. Lipman Bers: A Personal Remembrance, in *Remembering Lipman Bers, Notices of the AMS* **42** (1), (1995) 24-25. http://andromeda.rutgers.edu/~gilman/publications/47_Bers.pdf
49. Report on MSRI 1994 Summer Workshop on Hyperbolic Geometry and Dynamical Systems, (with D.B.A. Epstein and W.P. Thurston), *Notices of the AMS* **42** (12), (1995) 1520-1527. http://andromeda.rutgers.edu/~gilman/publications/48_MSRI.pdf

Edited Conference Proceedings

50. Editor (with Xiao-song Lin and W. Menasco), Proceedings 1998 Birman conference, **24**, *Studies in Advanced Math.* AMS & IP (2001).
51. Editor (with Canary, Heinonen, and Masur), *The Legacy Continues: in the Tradition of Ahlfors-Bers, IV*, Proceedings 2005 Ahlfors-Bers Colloquium, AMS CONM, **432** (2007).
52. Editor (with Bonk, Masur, Minsky and Wolf), *In the Tradition of Ahlfors Bers, V*, AMS CONM, **510**, (2010).

Lecture Notes

53. Lecture Notes for *Fresh Honors Math*, (with W.P. Thurston). Notes written for course in Calculus and Dynamical Systems given at Princeton University, Fall 1990, ~ 190 pages. http://andromeda.rutgers.edu/~gilman/publications/50_honors.pdf
54. (a) Geometry and the Imagination, (with John Conway, Peter Doyle, and W.P. Thurston), University of Minnesota, Geometry Center preprint GCG30, June 1991 (b) Geometry and the Imagination, Math 491, Lecture notes revised and adapted for Rutgers-Newark by Gilman, Spring 1994, Spring 1997, Spring 2005, and Spring 2006. http://andromeda.rutgers.edu/~gilman/publications/50_honors.pdf
55. Lecture Notes on Hyperbolic Geometry and Dynamical Systems, (with Alberto Castro, D.B.A. Epstein, & W.P. Thurston), lecture notes for graduate course, MSRI (1994).
56. MSRI lecture notes and video from MSRI talk on Schottky Groups August 2007.

LECTURES**Invited Research Lectures**

1. *CUNY Topology Seminar*, (scheduled) May 7, 2013
2. *CUNY Complex Analysis Seminar*, (TBD) S 2013
3. *AMS Special Session on Computational Algebraic and Analytic Geometry for Low-dimensional Varieties*, San Diego, January 2013.
4. *CUNY Goup Theory Seminar*, S 2012.
5. *CUNY Complex Analysis Seminar*, S 2012.
6. *CUNY Student Hyperbolic Geometry Seminar*, (2 talks) S 2012.
7. *AMS Special Session*, S 2011, New Orleans.
8. *Syracuse AMS Special Session in Honor of Clifford Earle*, Syracuse, NY, Fall 2010.
9. *NJIT AMS Special Session*, NJIT, Newark, NJ, May 2010.
10. *Plenary speaker*, Iboamericana Conference on Geometry, V, Chile, December 2009.
11. *AMS Special Session on Automorphisms of Riemann Surfaces and Algebraic Varieties*, October 2009.
12. *Topology and Geometry Seminar*, U Md, November 2009.
13. *Geometry and Topology Seminar*, Cornell University, May 2009
14. *CUNY Complex Analysis Seminar*, May 2009.
15. *AMS Special Session on Computational Algebraic and Analytic Geometry for Low-dimensional Varieties*, Washington, DC, January 2009.
16. *AMS Special Session on Hyperbolic Geometry*, NYC, March 2008.
17. *Teichmüller Theory semester*, MSRI, August 2007.
18. *AMS Special Session on Automorphisms of Curves*, Arizona, April 2007
19. *Colloquium*, Wesleyan University, S 2007.
20. *Topology and Geometry Seminar*, Rutgers-New Brunswick, S 2007.
21. *Complex Analysis Seminar*, CUNY Graduate Center S 2007.
22. *Topology and Geometry Seminar*, U. Warwick, June 2007.
23. *Topology and Geometry Seminar*, U. Conn, October 2006.
24. *Topology and Geometry Seminar*, Yale University, November 2006.

25. *AMS Special Session on Kleinian Groups and Hyperbolic Geometry*, October 2006.
26. Workshop on *Teichmüller Theory and Moduli Problems*, plenary speaker Harish-Chandra Research Institute, Allahabad, India, January 2006.
27. *Group Theory Seminar*, McGill University, March 2006.
28. *AMS Special Session on Automorphisms of Surfaces and Curves*, Santa Barbara, April 2005.
29. *Topology Seminar*, Rutgers, New Brunswick, S 2005.
30. Conference in honor of Gerhard Rosenberger, plenary speaker, Fairfield University, F 2004.
31. Iboamericana III conference on *Geometry*, Salamanca, Spain, June 2004.
32. *New York Group Theory Seminar*, CUNY graduate center, F 2003.
33. *Geometry Seminar*, Warwick University, S 2003.
34. *Topology and Geometry Seminar*, Durham University, S 2003.
35. *Colloquium*, University of Newcastle, S 2003.
36. *AMS Special Session on Algorithms and Algebraic Varieties*, Baltimore, January 2003.
37. *Topology and Geometry Seminar*, Kings College, University of London, S 2003.
38. *Colloquium*, UNC-Greensboro, (talk #2 given in conjunction with Sigma Xi Lecture), S 2002.
39. *Complex Analysis Seminar*, SUNY SB, S 2001.
40. Iboamericana meeting on *Teichmüller Theory*, plenary speaker, Guanajuato, Mexico, plenary speaker, January 2001.
41. *AMS Special Session on Computation on Algebraic Curves*, New Orleans, January 2001.
42. *Complex Analysis Seminar*, CUNY graduate center, S 2000.
43. *AMS Special Session on Symbolic Computation on Kleinian Groups*, NY, October, 2000.
44. *Special Session on Discrete Group Actions*, joint American-Australian Math Soc meetings, Melbourne, July 1999.
45. *Seminar on Algebra, Geometry and Computation*, University of Auckland, 1999.
46. *Midrasha Mathematicae*, plenary speaker, Institute for Advanced Study and Landau Center, Hebrew University of Jerusalem, May 1999.
47. *Conference on Riemann Surfaces*, plenary speaker, Einstein Institute, University of Jerusalem, June 1999.

48. *Colloquium*, Florida State University, October, 1998.
49. *NY Area Complex Analysis Seminar*, May 1997.
50. *Workshop on Computational and Algorithmic Methods in Three-dimensional Topology*, plenary speaker, MSRI, March 1997.
51. *Princeton-Rutgers Group Theory Seminar*, F 1996.
52. *Complex Analysis Seminar*, NIU, (talk #2 given in conjunction with Graduate School Colloquium lecture), S 1996.
53. *Graduate School Colloquium Lecture*, NIU, 1996.
54. *MSRI-Berkeley Monday Lecturer*, (MSRI-Berkeley colloquium), UC Berkeley, S 1996
55. *AMS Special Session on Geometry of 3-manifolds*, Boston, Mass, F 1995.
56. *Topology Seminar*, University of Marseille, F 1995.
57. *London Math Society Conference on Hyperbolic Groups*, plenary speaker, King's College, London, 1995.
58. *Berniefest AMS Special Session*, 45 minute talk, Hartford Conn, S 1995.
59. *Complex Analysis Seminar*, CUNY Graduate Center, F 1994.
60. *Hyperbolic Geometry Seminar*, University of Warwick, 1993.
61. *AMS Special Session on Discrete Groups*, DeKalb, S 1993.
62. *Colloquium*, Brown University, F 1993.
63. *AMS Summer Conference on Nielsen Theory and Dynamical Systems*, plenary speaker, Mount Holyoke, Mass., 1992.
64. *AMS Special Session on Discrete Groups*, joint LMS/AMS meeting, Cambridge, England, 1992.
65. *AMS Special Session on Hyperbolic Manifolds*, Dayton, Ohio, F 1992.
66. *Topology Seminar*, Columbia University, F 1991.
67. *AMS Special Session on discrete groups and geometric structures in 2, 3 and 4 dimensions*, Amherst, F 1990.
68. *Nevanlinna Colloquium*, 1/2 hour talk, Helsinki, June 1990
69. *AMS summer conference on Riemann Surfaces and Discrete Groups*, plenary speaker, Arcata, Ca., 1989.
70. *Colloquium*, Fordham University, F 1988.

71. *Geometric Topology Seminar*, Princeton University, F 1988.
72. *Nevanlinna Colloquium*, Joensuu, Finland, 1/2 hour talk, 1987.
73. *Workshop on Teichmüller Theory*, Helsinki, 1/2 hour talk, 1987.
74. *Complex Analysis Seminar*, SUNY Stony Brook, S 1987.
75. *Complex Analysis Seminar*, CUNY Graduate Center, F 1986.
76. *AMS Special Session on Kleinian Groups*, Denton, Texas, F 1986.
77. *MSRI Geometric Function Theory Seminar*, Berkeley, Ca., S 1986.
78. *Complex Analysis Seminar*, SUNY Stony Brook, S 1985.
79. *AMS Special Session on Geometric Function Theory*, Worcester, Mass., S 1985
80. *Riemann Surfaces Seminar*, SUNY Stony Brook, S 1984.
81. *Five Colleges Annual Mathematics Colloquium*, Smith College, Northampton, S 1983.
82. *AMS Special Session on Kleinian Groups*, Fairfield, Conn., F 1983.
83. *Colloquium*, University of Michigan, Ann Arbor, F 1982.
84. *AMS Special Session on Hyperbolic Geometry*, Amherst, Mass., F 1981.
85. *AMS Special Session on Quasiconformal Mapping*, Austin, Texas, F 1981.
86. *Geometric Topology Seminar*, Columbia University, F 1981.
87. *The New York Group Theory Seminar*, The Graduate Center, CUNY, S 1981.
88. *Amherst-UMass-Smith joint seminar on Low Dimensional Topology*, S 1981.
89. *AMS Special Session on Low Dimensional Topology*, Kenosha, Wisconsin, F 1980.
90. *Workshop on Topology and Kleinian Groups*, NSF Summer workshop at Bowdoin College, 1980
91. *Topology Seminar*, Institute for Advanced Study, Princeton, NJ, S 1980.
92. *AMS Special Session on Discrete Groups*, Philadelphia, S 1980.
93. *Riemann Surface Seminar*, Columbia University, (2 talks) F 1978.
94. *AMS Special Session on Kleinian Groups*, Syracuse, NY, F 1978.
95. *Colloquium*, Stevens Institute of Technology, F 1977.
96. *The New York Group Theory Seminar*, The Graduate Center, CUNY, F 1977.
97. *Colloquium*, City College, CUNY, S 1977.
98. *Riemann Surface Seminar*, Columbia University, S 1977.

Selected Popular Lectures

1. Fordham University Mathematics Department, February 2013.
2. Keynote speaker, First Annual DC Area Graduate Student Conference. George Washington University, April 2009.
3. Keynote speaker, Sigma Xi Lecture, NJ Liberty Science Center, Lucent's High School Science Competition Award Ceremony, 2002
4. *Pi Mu Epsilon Annual Lecture*, Oklahoma University, 1996.

SERVICE

Selected Professional Service

1. 2003-2006 & 2014-2016 Member, Sigma Xi Committee on Distinguished Lectureships.
2. Elected (in nationally contested election) representative for membership-at-large to Sigma Xi Nominating Committee.
3. 2011 Member, PhD thesis committee, Massey University, New Zealand, serving as the overseas expert.
4. 1997-2008 Ahlfors-Bers Colloquium. Member, Organizing Committee, Ahlfors-Bers Colloquium Lectures, 1997-2000 and 2003 -2008. Chair of organizing committee, 2006-2008. Colloquium held at Rutgers-Newark in 2008 (approximately 180 mathematicians from more that twelve countries attended).
5. 2007 Member, NSF panel on Geometric Function Theory.
6. 2005 Member, External Review Panel, Mathematics and Computer Science Department, University of Helsinki.
7. 1974-2012 Reviewer for *Mathematical Reviews*.
8. 1976-2012 Reviewer or Referee for various journals, conference proceedings, and funding agencies including: Duke Math. J., Math. Zeitschrift, Proc SB 78, Transactions of the AMS, Proceedings of the AMS, Ergodic Theory and Dynamical Syst., J. Pure and Applied Alg., Gehringfest Proceedings, Bers Colloquium Proceedings, Tohoku Journal, Canadian Journal, Crelle's Journal, NSF mathematics research grant proposals, Journal of the Math. Soc. of Japan, London Math Soc Journals, Revisita Mathematica Iberoamericana, Journal of Conformal Geometry and Dynamics, Marcel Dekker, Topology, Proc AB98, Math Research Letters, Journal Pure and Applied Algebra, Journal D'Analyse Mathematique, Israel Journal of Mathematics, Publicacions Matemàtiques, Conformal Geometry and Dynamics, Algebraic and Geometric Topology, Journal of Differential Geometry, Geometry and Topology, Ann. Acad. Sci. Fenn., Amer. J.

9. 1986-2003 Service in American Mathematical Society offices with membership determined by contested national elections.
 - AMS Editorial Boards Committee, *Member* (3 year term), February 1, 2001-January 31, 2004; Chair February 01, 2002-January 31, 2003.
 - AMS Nominating Committee, *Member* (3 year term), 1996-1999.
 - AMS Nominating Committee, *Member* (2 year term), 1988-89; Appointed Chair CY 1988 and CY 1989.
 - AMS Council, *Member-at-large*, (3 year term), 1986-88.
10. 2000 Co-organizer, Special Session on Symbolic Computation on Kleinian Groups, AMS meeting, NYC.
11. 1997-1998 Member, Organizing Committee *Birmanfest* conference.
12. 1995-1996 Organizer, Special Session on Hyperbolic Geometry and Discreteness Criteria, AMS meeting, NYC.
13. 1994-1995 Member, Organizing Committee, First Tri-annual *Bers Colloquium* and Member, editorial board, Proceedings of the Inaugural Bers Colloquium.
14. 1991 & 1993 Member, NSF panel on Calculus Reform, 1993 and Member, NSF Panel on Education Materials, 1991.
15. 1987-1996 External Reviewer: Department of Mathematics and Computer Science; Lehman College, CUNY, 1996; Mathematics Department, College of Staten Island, 1996; and Pure and Applied Mathematics departments, SUNY Stony Brook, 1987.
16. 1994 Invited Course: Graduate Workshop on Hyperbolic Geometry and Dynamical Systems at Mathematical Sciences Research Institute, Berkeley, Ca (with D.B.A Epstein, P. Doyle and W.P.Thurston), two weeks.
17. 1992 Invited talk on Mathematics Education Reform, AMS, Special Session.
18. 1991 Invited course: for graduate and undergraduate students, post-docs, high school teachers and advanced high school students- Geometry and the Imagination, Geometry Center, U of Minnesota (with Conway, Doyle, and Thurston) two weeks.

Selected Rutgers Service

1. 2012-2103, 2007-2008, 2003-2004. RN Director, Complex Variables Graduate Student Qualifying Exam.
2. 2011-2012 Member, College Promotion Committee (for ad hoc PII case).
3. 2007-2008 Member, Department Executive Committee.
4. 2007-2008 Member, Chair's Ad Hoc Committee on Teaching Load Reduction, FASN Mathematics and CS department.

5. 2001-2006 Member, FASN, A&P Committee, 2001-2004 (3 AY years) and 2005-2006.
6. S 2005 Acting Chair, FASN Math and CS department, six weeks.
7. 2004 & 2006 Internal Seminar Talks, Departmental Seminar on Teichmüller Theory, two talks on *A Road Map to T-space*, S 2006; Internal Colloquium-Seminar for Graduate Students *Algorithms for Discreteness* S 2004.
8. 2001-2005 Member, Department PEC, 2001-2002, 2002-2003, and 2004-2005.
9. 2004-2005 Member, FASN/AAUP Grievance Panel.
10. 2003-2004 Member, FASN, Affirmative Action Committee.
11. 1997-2000 Member, Newark Provost's Faculty Advisory Council, 1997-2000 representing the Graduate School Newark and Member, Executive Committee, 1998-2000.
12. 1996-1998 Member, Department Graduate Program Committee.
13. 1982-90 Chair, Department of Mathematics, Faculty of Arts and Science, Newark.
14. 1989-90 Chair, Joint Rutgers-Newark/New Jersey Institute of Technology (RN/NJIT) Committee to design Mathematics PhD program.
15. 1983-84 & 1985-86 Chair, joint Rutgers-Newark Faculty of Arts and Sciences and New Jersey Institute of Technology, (FASN/NJIT), Computer Science Program.
16. 1980-82 Appointed to implement the College-wide Mathematics Proficiency graduation requirement mandated by the Faculty of Arts and Science, Newark (FASN) in Fall 1980.

Memberships in Professional Societies

American Mathematical Society (AMS); Sigma Xi; Mathematics Association of America (MAA); Association for Women in Math (AWM) and (*previous*) Association for Computing Machinery (ACM) and Mathematics Education Reform Network (MER).

Courses taught at Rutgers-Newark

College Algebra, Trigonometry, Precalculus, Computers and Programming I, Calculus I, II and IV, Honors Calculus I and II, Linear Algebra, Probability and Statistics, Intro to Modern Mathematics (for Math majors); Undergraduate Abstract Algebra I and II, Complex Variables (undergraduate and graduate), TA for first experimental Large Lecture Calculus (to back up the lecturer; the department had no TA's at the time), Undergraduate Topology I and II, Undergraduate Mathematics Seminar, Graduate Differential Geometry, Graduate Complex Variables I and II, Graduate Topics in Complex Variables and Graduate Topics in Geometry.