CURRICULUM VITAE

July 2009

Name
Lisa Carbone.

E-mail address
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Web address
http://www.math.rutgers.edu/ ~carbonel.

Undergraduate Education
Bachelor of Science with Honours, University of Melbourne (1988).

Postgraduate Education
Doctor of Philosophy, Columbia University (1997).
Master of Philosophy, Columbia University (1997).
Master of Arts, Columbia University (1993).
Master of Science, University of Melbourne (1992).

PhD Advisor
Hyman Bass.

Academic Positions
Associate Professor of Mathematics, Rutgers University (2005 - present).
Tenure Track Assistant Professor of Mathematics, Rutgers University (2001- 2005).
Benjamin Peirce Assistant Professor of Mathematics, Harvard University (July 1997-Aug 2001).
Assistant Professor of Mathematics, Yale University (July 1998-July 1999).

Visiting Positions
University of Melbourne, Visiting Scholar (June 2009).
University of Sydney, Visiting Scholar (July 2005, July 2006).
University of California, San Diego, Visiting Scholar (Fall 2002).
Yale University, Visiting Fellow (1999-2000, 2000-2001).
University of Melbourne, Visiting Research Fellow (June-July 1999, June-August 2002).
Institute of Mathematics, Hebrew University of Jerusalem, Visiting Research Fellow (June 2000).
Hebrew University of Jerusalem, Visiting Research Fellow (May 1998).
Universita' degli Studi di Roma, Visiting Research Fellow (Jan 1996).
Columbia University, Visiting Scholar (1991-1992).
City University of New York Graduate Center, Visiting Scholar (Jan 1989).

Research Awards and Grants
National Science Foundation Principal Investigator Award (#DMS-0701176, 2007-present).
Foreign Principal Investigator, Australian Research Council Linkage Grant, with University of Newcastle (2006).
National Science Foundation Principal Investigator Award (#DMS-0401107, 2004-2007).
National Science Foundation Principal Investigator Award (#DMS-0100149, 2001-2004).
National Science Foundation Principal Investigator Award (#DMS-9800604, 1998-2001).
US-Israel Bi-national Science Foundation Grant (2000-2003).
Faculty Aid Program, Harvard University (1999-2000, 2000-2001).
Clark Travel Fund for Research, Harvard University (1998-1999, 1999-2000, 2000-2001).
Clark Computer Fund, Harvard University (1999-2000).
Columbia University Faculty Fellowship, Graduate School of Arts and Sciences (1992-1996).
Rotary Foundation Fellowship (1991-1992).

Grants for Organizing Conferences and Workshops
Special Semester on Analysis and Group Actions on Trees and Buildings, Organized by Lisa Carbone, Spring 2006, http://www.math.rutgers.edu/ ~carbonel (Funded in Part by NSF, DIMACS and the Australian Research Council).
Groups and Algebras in M-theory, Rutgers University, Organized by Lisa Carbone, May 2005, http://www.math.rutgers.edu/ ~carbonel (Funding from NSF).
Sphere Packings, Lattices, and Infinite Dimensional Algebra, August 16 to August 20, 2004, at the American Institute of Mathematics, Palo Alto, California, Organized by Lisa Carbone, Noam Elkies, and Jim Lepowsky, http://www.aimath.org/ARCC/workshops/spherepacking.html (Funding from AIM).
p-Adic Groups Workshop, Harvard University, Summer 1998 (Funding from Harvard Math Department).

Publications and manuscripts

Journal Articles (Refereed)

[CCCMNNP] Carbone, L, Chung, S, Cobbs, C, McRae, R, Nandi, D, Naqvi, Y, and Penta, D, *Classification of hyperbolic Dynkin diagrams, root lengths and Weyl group orbits*, Submitted to *Journal of physics. A. Mathematics and theoretical* (2009).

[CCM] Carbone, L, Cobbs, C and Murray, S, *Fundamental domains for congruence subgroups of SL_2 in positive characteristic*, Submitted to *Combinatorica* (2009).

[CC09] Carbone, L and Cobbs, C, *Infinite descending chains of cocompact lattices in Kac-Moody groups*, Submitted to *Groups, geometry and dynamics* (2009).

[ACP] Andersen, K, Carbone, L and Penta, D, *Kac-Moody Fibonacci sequences, hyperbolic golden ratios, and real quadratic fields*, Submitted to *Journal of Combinatorics and Number Theory* (2009).

[C09] Carbone, L, *The Haagerup property, Property (T) and the Baum-Connes conjecture for locally compact Kac-Moody groups*, Submitted to *Journal of K-theory* (2009).

[CN] Carbone, L and Naqvi, Y, *Hyperbolic Kac-Moody Weyl groups, lattices and actions on trees*, To appear in *Groups, geometry and dynamics, a volume deciated to Wilhelm Magnus* (2009).

[CER] Carbone, L, Ershov, M and Ritter, G, *Abstract simplicity of complete Kac-Moody groups over finite fields*, Journal of Pure and Applied Algebra **212** (2008), 2147–2162.

[CCi] Carbone, L and Ciobanu, L, *Characterization of Non-minimal Tree Actions*, Revue Roumaine de Mathematiques Pures et Appliquees, (Romanian Journal of Pure and Applied Mathematics) **52 No. 4** (2007), 377-388.

[CCl1] Carbone, L and Clark, D, *Bass-Tits Minimization of Automata, Quotients of Trees and Diameters*, Journal of Pure and Applied Algebra **204 (2)** (2006), 300–316.

[C04] Carbone, L, *Non-minimal Tree Actions and the Existence of Non-uniform Tree Lattices*, Bulletin of the Australian Mathematical Society, Vol 70 (2004), 257-266.

[CG1] Carbone, L and Garland, H, *Existence of Lattices in Kac-Moody Groups over Finite Fields*, Communications in Contemporary Math, Vol 5, No.5 (2003), 813-867.

[CR1] Carbone, L and Rosenberg, G, *Lattices on Non-uniform Trees*, Geometriae Dedicata **98** (2003), 161-188.

[C02] Carbone, L, *The Tree Lattice Existence Theorems*, Comptes Rendus de l'Academie des Sciences. Serie I, Mathematique, 335 (2002), 223-228.

[CCl2] Carbone, L and Clark, D, *Lattices on Parabolic Trees*, Communications in Algebra, Vol. 30, Issue 4 (2002), 1853-1886.

[CR2] Carbone, L and Rosenberg, G, *Infinite Towers of Tree Lattices*, Mathematical Research Letters **8** (2001), 1-10.

[CG2] Carbone, L and Garland, H, *Lattices in Kac-Moody Groups*, Mathematical Research Letters **6** (1999), 439-447.

Books

[C01] Carbone, L, *Non-uniform Lattices on Uniform Trees*, Memoirs of the AMS, vol. 152, no. 724, 127 pages, ISBN 0821827219 (2001).

Chapters in Books

[BCR] Bass, H, Carbone, L, and Rosenberg, G, *The Existence Theorem for Tree Lattices*, Appendix [BCR] in '*Tree Lattices*' by Hyman Bass and Alex Lubotzky (2000), Progress in Mathematics 176, Birkhauser, Boston, 167-184.

[C99] Carbone, L, *Characterizations and Types of Trees*, Handbook of Discrete and Combinatorial Mathematics, (ed. K. Rosen et al) (1999), CRC Press, 603-616.

[C96] Carbone, L, *A Filtration of the Chain Complex of a Rewriting System*, Geometric and Computational Computer Science, Ed. Gilman, et al **25** (1996), AMS, 9-26.

Refereed Conference Proceedings

[Car99] Carbone, L, *Constructing Tree Lattices*, Algebras and Combinatorics. An International Congress, ICAC '97, Hong Kong (edited by K. P. Shum, and E. Taft) (1999), Springer, 63-97.

Preprints

[Car04] Carbone, L, *On the Classification of Rank 1 Groups Over Non-archimedean Local Fields*, http://www.math.rutgers.edu/~carbonel/html/online_manuscripts.html (2004).

Plenary Lectures

Discrete, interactive and algorithmic mathematics, algebra and number theory meets geometry and quantum theory (DIAMANT meets GQT) 'Lattices, buildings and Kac-Moody groups', Lorentz Center, Leiden, Netherlands (October 2008).

Connections for Women: Classics of Geometric Group Theory 'Trees and group actions I and II', MSRI, Berkeley (Aug 2007).

57th ALGEBRA DAY, 'Lorentzian Kac-Moody Groups', The Ottawa-Carleton Institute for Mathematics and Statistics (Oct 2005).

Conference Presentations, lectures, demonstrations

University of Melbourne, Algebra, geometry, topology seminar 'Hyperbolic Kac-Moody symmetry, actions on buildings and applications' (June 2009).

Vanderbilt University, Conference on Noncommutative Geometry and Geometry Over the Field with One Element, 'Group functors over fields and Tits geometries' (3 lectures) (May 2009).

JAMI Johns Hopkins University, Lie Groups Seminar 'Hyperbolic Kac-Moody symmetry, arithmetic and applications' (April 2009).

Rutgers University, Lie Groups Seminar 'Hyperbolic Kac-Moody symmetry and applications' (March 2009).

University of Wisconsin, Madison, Algebraic Geometry Seminar 'Kac-Moody groups, finite fields and Tits geometries' (December 2008).

New York Algebra Colloquium, City University of New York Graduate Center, 'Lattices, buildings and Kac-Moody groups' (October 2008).

Ohio State University, Conference on Examples of Groups, 'Exotic buildings I and II' (June 2008).

Vanderbilt University, Conference on Noncommutative Geometry and Geometry Over the Field with One Element, 'Kac-Moody groups, finite fields and Tits geometries' (May 2008).

Brown University, Group actions seminar 'Tits buildings for hyperbolic Kac-Moody groups' (May 2008).

Brown University, Colloquium 'Lattices, buildings and Kac-Moody groups' (April 2008).

Rutgers University, Faculty Research Perspectives 'Kac-Moody symmetry in mathematics and physics' (Feb 2008).

University of Canterbury, Edward Percival Field Station, Kaikoura, New Zealand, Conference on Finite Group and Representations, 'Lattices, trees and Kac-Moody groups' (Jan 2008).

DIMACS, Rutgers University, REU lecture 'Trees and group actions' (July 2007).

Rice University, Department Colloquium 'Hyperbolic Kac-Moody Groups' (Oct 2006).

Rutgers University, Newark, Department Colloquium 'Hyperbolic Kac-Moody Groups' (March 2006).

City University of New York, Graduate Center, Group Theory Seminar, 'Hyperbolic Kac-Moody Groups' (Nov 2005).

Universita' degli Studi di Roma (La Sapienza), Seminario di Analisi Armonica, 'Hyperbolic Kac-Moody Groups' (Oct 2005).

University of Newcastle, Newcastle, Australia, Analysis Seminar, 'Lorentzian Kac-Moody Groups' (July 2005).

University of Delaware, AMS meeting, Special Session on Arithmeticity of Lattices, 'Lattices in Kac-Moody Groups' (April 2005).

College of Charleston, Department Colloquium 'Lattices, Buildings and Kac-Moody Groups' (March 2005).

University of Chicago, Geometry/Topology Seminar, 'Lattices, Buildings and Kac-Moody Groups' (November 2004).

Rider University, AMS meeting, Special Session on Geometry and Arithmetic of Lattices, 'Congruence subgroups of lattices in rank 2 Kac-Moody groups over finite fields' (April 2004).

Rutgers University, Department Colloquium, 'Faculty Research Perspectives', 'Group actions, lattices and Kac-Moody groups' (April 2004).

University of Sydney, Algebra Seminar, 'Arithmetic structure of lattices in rank 2 Kac-Moody groups over finite fields' (July 2003).

International Conference on Group theory, Combinatorial, Geometric and Dynamical Aspects of Infinite Groups, Gaeta, Italy, 'Congruence subgroups of lattices in rank 2 Kac-Moody groups over finite fields' (June 2003).

Courant Institute, NYU, 986th AMS meeting, Special Session on Combinatorial and Statistical Group Theory, 'Arithmetic structure of lattices in rank 2 Kac-Moody groups over finite fields' (April 2003).

Rutgers University, Lie Groups Seminar, 'Congruence subgroups of lattices in rank 2 Kac-Moody groups over finite fields' (April 2003).

University of California, Berkeley, Group Theory Seminar, 'Group actions, lattices and Kac-Moody groups' (December 2002).

University of California, San Diego, Algebra/Number Theory Seminar, 'Group actions, lattices and Kac-Moody groups' (December 2002).

University of California, San Diego, Graduate Colloquium, 'Trees and SL_2' (December 2002).

University of Illinois, Urbana-Champaign, Group Theory Seminar, 'Lattices in Kac-Moody groups over finite fields' (September 2002).

International Congress of Mathematics, Satellite Conference on Algebra, Suzhou, China, 'The tree lattice existence theorems' (September 2002).

University of Melbourne, Geometry/Topology Seminar, 'Arithmetic structure of lattices in rank 2 Kac-Moody groups over finite fields' (August 2002).

Institute of Mathematics, The University of Hong Kong, Conference on Combinatorial and Computational Algebra, 'Lattices in Kac-Moody groups over finite fields' (June 2002).

Universite de Montreal, 976th AMS meeting, Special Session on Combinatorial and Geometric Group Theory, 'Lattices in Kac-Moody groups over finite fields' (May 2002).

Rutgers University, Algebra Seminar, 'Lattices in Kac-Moody groups over finite fields' (April 2002).

SUNY at Binghamton, Topology Seminar, 'Reconstructing group actions' (Feb 2002).

University of Sydney, Algebra Seminar, 'Trees and group actions' (July 2001).

Australian National University, Institute of Mathematics, Algebra Seminar, 'The tree lattice existence theorems' (July 2001).

University of Hong Kong, Institute of Mathematics, Conference on Computational and Combinatorial Algebra, 'Reconstructing group actions' (June 2001).

Brandeis University, Seminar, 'The tree lattice existence theorems' (April 2001).

Brown University, Geometry and Topology Seminar, 'Reconstructing group actions' (February 2001).

University of California, San Diego, Department Colloquium, 'The tree lattice existence theorems' (February 2001).

University of California, Berkeley, Special Lecture, 'The tree lattice existence theorems' (February 2001).

Harvard University, Differential Geometry seminar, 'Reconstructing group actions' (February 2001).

Rutgers University, Department Colloquium, 'The tree lattice existence theorems' (January 2001).

University of Chicago, Geometry/Topology Seminar, 'The tree lattice existence theorems' (January 2001).

University of Illinois at Chicago, Department Colloquium, 'The tree lattice existence theorems' (January 2001).

University of Maryland, Topology/Geometry Seminar, 'The tree lattice existence theorems' (November 2000).

Yale University, Department Colloquium, 'The tree lattice existence theorems' (September 2000).

University of Illinois at Urbana-Champaign, Group Theory seminar, 'The tree lattice existence theorems' (August 2000).

University of Melbourne, Geometry and Topology Seminar, 'The tree lattice existence theorems' (July 2000).

University of Hong Kong, Institute of Mathematics, Conference on Combinatorial Algebra, 'Deformations of lattices in SL_2 over non-archimedean local fields' (July 2000).

Hebrew University of Jerusalem, Asymptotic Group Theory Conference, 'Existence theorems for tree lattices' (May 2000).

Rutgers University, Topology Seminar, 'Existence theorems for tree lattices' (September 1999).

University of California, Berkeley, Geometric Group Theory Seminar 'Existence theorems for tree lattices' (September 1999).

University of Melbourne, A Course of Lectures given at a Workshop on Group Theory and Topology, Joint Meeting of the Amer. Math. Soc and the Aust. Math. Soc., 'Trees and group actions' (July 1999).

University of Hong Kong, International Conference on Computational and Combinatorial Algebra, 'Lattices, trees and group actions' (June 1999).

Princeton University, Algebra Seminar, 'Existence theorems for tree lattices' (November 1998).

Albany Group Theory Conference, 'p-Adic groups' (October 1998).

Yale University, Algebra Seminar, 'p-Adic groups' (October 1998).

Yale University, A course of lectures given in the Dynamics of Group Actions Seminar, 'Lattices, trees and group actions' (October 1998).

Hebrew University of Jerusalem, Algebra Seminar, 'Lattices, trees and group actions' (June 1998).

Hebrew University of Jerusalem, Lie Groups Seminar, 'Non-uniform lattices on uniform trees' (June 1998).

Boston University, Algebra Seminar, 'Trees, lattices and SL_2' (March 1998).

Harvard University, Algebraic Number Theory Seminar, 'Non-uniform lattices on uniform trees' (October 1997, November 1997).

Harvard University, Algebraic Geometry Seminar, 'Trees, lattices and SL_2' (September 1997, October 1997).

Chinese University of Hong Kong, International Congress in Algebra and Combinatorics, 'Constructing tree lattices' (August 1997).

Cornell University, Topology Festival, 'Non-uniform lattices on uniform trees' (May 1997).

Columbia University, Topology Seminar, 'Non-uniform lattices on uniform trees' (May 1997).

City University of New York Graduate Center, New York Group Theory Seminar, 'Non-uniform lattices on uniform trees' (November 1996).

Ecole d'ete du CRM - Geometric Group Theory, Banff, Alberta, Canada (August 1996).

Universita' degli Studi di Genova, Algebra Seminar, 'Non-uniform lattices on uniform trees' (July 1996).

European Science Foundation Conference on Algebra and Discrete Mathematics, Castelvecchio Pascoli, Italy, 'Non-uniform lattices on uniform trees' (July 1996).

Princeton University, Princeton-Rutgers Group Theory Seminar, 'Lattices in the automorphism group of a tree' (March 1996).

Universita' degli Studi di Roma (Tor Vergata), Geometry Seminar, 'Lattices in the automorphism group of a tree' (January 1996).

Graduate Courses

Kac-Moody Symmetry in Mathematics and Physics, Rutgers University (Spring 2009).

Sphere Packings, Lattices and Group Actions, http://www.math.rutgers.edu/ ~ carbonel/html/courses.html, Rutgers University (Fall 2003).

Kac-Moody Algebras, http://www.math.rutgers.edu/~carbonel/html/courses.html, Harvard University (Spring 2001).

Trees and Group Actions, http://www.math.rutgers.edu/~carbonel/html/courses.html, Yale University (Fall 1998).

Graduate Research Projects, Seminars and Reading Courses

Seminar 'Supergravity', with mathematics and physics PhD students, Rutgers University (Summer 2009).

Research Project 'Ultralimits of Kac-Moody data', with Yusra Naqvi, mathematics PhD student, Rutgers University (2007-present).

Research Project 'Descending chains of lattices in Kac-Moody groups', with Leigh Cobbs, mathematics PhD student, Rutgers University (2005-present).

Research Project 'Weyl group orbits on Kac-Moody root systems ', with Diego Penta, mathematics Masters student, Rutgers University (2004-present).

Research Project 'Structure of Kac-Moody groups' with Alex Conway, mathematics graduate student, Princeton University (2007-present).

Research Project 'Kac-Moody Fibonacci sequences, real quadratic fields and cohomology of flag varieties', with Diego Penta, mathematics Masters student, Rutgers University (2004-present).

Research Project 'Subgroups of Kac-Moody groups' with Corina Calinescu, mathematics graduate student, Rutgers University (2003-2006).

Research Project 'Automorphic Spectra on Quotients of Rank 2 Kac-Moody Groups over Finite Fields', with Dennis Clark (2003-2006), undergraduate at Harvard University (1997-2002), graduate student at University of Michigan (2002-2004).

Research Project 'Bass-Tits Minimization of Automata, Quotients of Trees and Diameters' with Dennis Clark (2003-2005), undergraduate at Harvard University (1997-2002), graduate student at University of Michigan (2002-2004).

Research Project 'Abstract Simplicity of Kac-Moody Groups over Finite Fields' with W. Gordon Ritter, physics graduate student at Harvard university (2003-2006).

Research Project 'Characterization of Non-minimal Tree Actions' with Laura Ciobanu, mathematics graduate student, Rutgers University (2002-2004).

Organizer of 'Junior algebra seminar'. Graduate students from Rutgers and Harvard mathematics and physics departments meet every other month to give talks on topics of their own choosing., Rutgers University (2002-2004).

Reading Course 'Kac-Moody Algebras' with Will Toler, third year physics graduate student, Rutgers University (2001-2002, 2002-2003).

Reading Course 'Group Actions on Trees and Group Decompositions' with Laura Ciobanu, third year mathematics graduate student, Rutgers University (2001-2002).

VIGRE Reading Course 'Topological Methods in Group Theory', with Will Cuckler and Ben Kennedy, first year mathematics graduate students, Rutgers University (2001-2002).

Translations of mathematics papers, German-to-English, English-to-French, with Benjamin Doyon, third-year physics graduate student and Sasa Radomirovic, third year math graduate student. We translated a paper from English to appear in a French journal, and a German paper into English for a research project, Rutgers University (2002).

Research Project 'Lattices on Parabolic Trees' with Dennis Clark (2000), undergraduate at Harvard University (1997-2002), graduate student at University of Michigan (2002-2004).

Research Seminar 'p-Adic Groups' with mathematics graduate students, Harvard University, http://www.math.rutgers.edu/~carbonel/html/courses.html (1997-1998).

Undergraduate Research Projects, Seminars and Reading Courses

Independent Study and Introduction to Research 'Geometry of Kac-Moody root systems' with Hanna Komlos, Rutgers University (Spring 2007, Fall 2007, Spring 2008).

Independent Study and Introduction to Research 'Weyl orbits on Kac-Moody root systems' with Alexander Conway and Diego Penta 3 credits, Rutgers University (2005-2006).

Independent Study and Introduction to Research 'Lorentzian Kac-Moody Algebras' with Alexander Conway (sophomore), Jodi Curiotto (junior) and Anand Khare (junior), 1 credit, Rutgers University (Fall 2004).

Undergraduate Teaching

Geometry, Lecturer, Department of Mathematics, 20 undergraduate students, Rutgers University (Fall 2007).

Introduction to Math Reasoning, Lecturer, Department of Mathematics, 25-30 undergraduate students, Rutgers University (Spring 2002, Spring 2003, Fall 2004, Fall 2005, Spring 2006, Spring 2007, Spring 2008, Fall 2008).

Calculus 2, Lecturer, Department of Mathematics, 2 sections, 70-72 students each section, 3 credits, Rutgers University (Spring 2004).

Introduction to Linear Algebra, Lecturer, Department of Mathematics, 25-30 undergraduate students, Rutgers University (Fall 2001 (2 sections), Spring 2003).

Lie Algebras, Lecturer, Department of Mathematics, 2 graduate students, 3 undergraduate students, 3 credits, Harvard University (Spring 2001).

Topology, Lecturer, Department of Mathematics, 21 undergraduate students, 3 credits, Harvard University (Spring 2000).

Calculus 1a, Lecturer and Course Head, Department of Mathematics, 23 undergraduate students, 3 credits, Yale University (Spring 1999).

Sets, Maps and Symmetry Groups, Lecturer, Department of Mathematics, 2 graduate students, 25 undergraduate students, 3 credits, Harvard University (Spring 1998, Spring 2001).

Representations of Finite Groups, Lecturer, Department of Mathematics, 6 undergraduate students, 3 credits, Harvard University (Spring 1998).

Calculus 1a, Lecturer, Department of Mathematics, 25-30 undergraduate students, 3 credits, Harvard University (Fall 1997, Fall 1999).

Basic Math, Lecturer and Course Head, Department of Mathematics, 17-20 undergraduate students, 4.5 credits, Columbia University (Fall 1996, Spring 1997).

College Algebra, Lecturer, Department of Mathematics, 25-30 undergraduate students, 3 credits, Columbia University (Fall 1996, Summer 1997, Summer 1995).

Graph Theory, Recitations and some lectures, Department of Computer Science, 25-30 undergraduate students, 3 credits, Columbia University (Fall 1995, Spring 1996).

Concrete Mathematics - A Foundation for Theoretical Computer Science, Undergraduate Seminar in Mathematics (6 undergraduates gave seminars), 3 credits, Columbia University (Fall 1995).

Discrete Mathematics, Recitations and some lectures, Department of Computer Science, 25-30 undergraduate students, 3 credits, Columbia University (spring 1996).

Mathematica for Calculus I and II - Recitations in Computer Lab, Department of Mathematics, 18-20 undergraduate students, 4.5 credits, Columbia University (Fall 1994, Spring 1995).

Hyperbolic Geometry and Knot Theory, Undergraduate Seminar in Mathematics (7 undergraduates gave seminars), 3 credits, Columbia University (Fall 1993).

Representations of Finite Groups, Undergraduate Seminar in Mathematics (5 undergraduates gave seminars), 3 credits, Columbia University (Spring 1994).

Calculus I, Lecturer, Columbia College Opportunity Programs for Minorities, 15-20 undergraduate students, Columbia University (Summer 1993).

Lecturer, Calculus I and II, Algebra and Trigonometry, Complex Analysis, Introductory Mechanics, Mathematics Special Assistance Unit, Department of Mathematics, University of Melbourne (1989 to 1991).

Resident Mathematics Tutor, Trinity College, University of Melbourne (1991).

English for Academic Purposes (Mathematics), Lecturer, Footscray College of TAFE, Melbourne (Sept to Dec 1988).

Advising

Evaluation of Rutgers PhD students as teaching assistants, Rutgers University (Spring 2007, Spring 2008, Spring 2009).

Adviser to PhD Student, Yusra Naqvi, Rutgers University (2007-present).

Adviser to Undergraduate Research Assistant, Hanna Komlos, Rutgers University (2006-2008).

Adviser to PhD Student, Leigh Cobbs, Rutgers University (2005-2009).

Adviser to Undergraduate Research Assistant, Alexander Conway, Rutgers University 2004-2007, Princeton University 2007-present.

Adviser to MSc Research Assistant, Diego Penta, Rutgers University (2004-present).

Adviser to Graduate Research Assistant, Gordon Ritter, Harvard University (2000-2001).

Adviser to Undergraduate Research Assistants (Lisa Powell, Jeff Enos, Dennis Clark) through VIGRE, Harvard University (1999-2000, 2000-2001).

Intensive Undergraduate Advising: A panel of faculty to interview each sophomore once per semester about course and career choices, Harvard University (2000-2001).

Undergraduate Adviser: Advised 4 mathematics majors each year, Harvard University (1999-2000, 2000-2001).

Editorial Boards

Member of Editorial Board of a DIMACS Book Series: Published by the American Mathematical Society (2004-present).

Refereeing Experience

Acta Mathematica (2009).
Journal of Number Theory (2008).
Duke Math Journal (2007).
Geometria Dedicata (2006, 2007).
Memoirs of the American Mathematical Society (2006).
Communications in Algebra (2006).
NSF (2001, 2002, 2003, 2004, 2005).
Math Reviews (2002).
Journal of Pure and Applied Algebra (2006, 2007).
European Journal of Combinatorics (1997).
Inventiones Mathematicae (1996).

Consulting Experience

Math for America, Standard setting for Newton Fellowship (Sept 2005).
Revlon Consumer Products Corporation, Patents division, New York, NY (1998-1999).

Professional Affiliations

Permanent Elected Member of DIMACS (Center for Discrete Mathematics and Theoretical Computer Science), a collaborative project of Rutgers University, Princeton University, AT&T Labs, Bell Labs, Telcordia Technologies, NEC (Founded as a NSF Science and Technology Center).

Committees

NSF Site visit to MSRI (Fall 2009).

Rutgers Physical Sciences Area Committee (2009-2011).
Rutgers GAANN steering committee (2009).
AMS Committee on Academic Freedom, Tenure and Employment Security (CAFTES) (2008-2011).
Colloquium Committee, Rutgers University (2006-present).
Graduate Committee, Alternate member, Rutgers University (2005-2007).
Library Committee, Rutgers University (2003-2006).
AMS Representative to 'Joint Committee on Women in the Mathematical Sciences' for AMS, MAA, AWM, NCTM, ASA (2002-2005).
Qualifying exams, writing and grading, Harvard University (1999-2000, 2000-2001).
Graduate Admissions, Harvard University (1997-1998).
Member PhD Defense Committee, Shahriar Mokhtari-Shargi, Columbia University (Fall 1997).

Panels
NSF Panel, October 2007.
IAS/Princeton Women and Mathematics program 'A day in the life', IAS (May 2007).
Speaker on VIGRE Panel 'Academic Job Hunting from the View of the Job- Hunter', Rutgers University (Fall 2001).

Other Activities
Co-organizer of 'Group Theory Seminar', Rutgers University (2001-present).

Related Employment
Educational Testing Service (Writing GRE and GMAT tests), Princeton, NJ (1995, 1996).
Research Assistant (Internet Resources for Mathematicians), Department of Mathematics, Columbia University (1993-1995).
Research Assistant (Educational Testing), Related Projects: 1) Computer Assisted Diagnostic Testing, Australian Council for Educational Research, 2) Large Group Teaching, Center for the Study of Higher Education at the University of Melbourne, Department of Mathematics, University of Melbourne (1988 to 1991).
Corporate Business Superannuation Fund Administrator, National Mutual Life Association of Australia (Jan to Aug 1988).