CURRICULUM VITAE

Lynne H. Walling

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Education

Ph.D.	Dartmouth College, 1987
	Theta series attached to lattices of arbitrary rank
	Advisor: Thomas R. Shemanske
A.M.	Dartmouth College, 1984
B.A.	Sonoma State University, 1982

Professional Positions

2011–2015	Head of Pure Maths	University of Bristol
2007–present	Reader	University of Bristol
2004–2006	Chair	University of Colorado, Boulder
2002–2004	Graduate Chair	University of Colorado, Boulder
2000–2002	Math Program Officer	National Science Foundation
2000–2007	Professor	University of Colorado, Boulder
November 2000,	Visiting Scientist	RIP Program,
May 2001		Oberwolfach Germany
January 2000	Visiting Scientist	Max Planck Institut
1997–1998	NSF Visiting	UC Berkeley, California
	Assoc. Prof.	
1995–2000	Associate Professor	University of Colorado, Boulder
1995–1996	Visiting Assoc. Prof.	Mills College
summer 1995	Seminar Leader	Summer Mills Institute, Berkeley
1994–1995	Member	Mathematical Sciences
		Research Institute
1992–1993	Undergraduate Chair	University of Colorado, Boulder
1990–1995	Assistant Professor	University of Colorado, Boulder
1989–1990	Assistant Professor	Bates College
1987–1989	Assistant Professor	St. Olaf College

Role as an National Science Foundation (NSF) Program Officer

- As a Program Officer in the Algebra, Number Theory, and Combinatorics group (ANTC) within the NSF Division of Mathematical Sciences (DMS), I was responsible for handling over 100 "standard" grant proposals each year. I selected reviewers and, based on my analysis of reviews, I recommended which proposals to fund and which to decline. (All analyses of reviews are written, and recommendations for funding or declination must first be approved by the Division Director, and then approved by the Division of Grants and Awards; none of my recommendations were disputed.) In my first year, I handled the Number Theory and the Group Theory proposals, soliciting reviews from experts via mail. In my second year, I handled the Algebraic Geometry and the Combinatorics proposals, selecting expert panelists and then chairing panels to review the proposals. Each year, together with several other Program Officers, I managed a budget of $13 million.

- I was also a member of the 2001-2002 DMS Management Team for the Vertical Integration of Research and Education program (VIGRE), an infrastructure program whose main goal is to increase the number of well-prepared U.S. citizens, nationals, and permanent residents who pursue careers in the mathematical sciences, and to broaden their backgrounds and perspectives. I was a member of several teams that conducted site visits as a part of the assessment of VIGRE applications. I took part in all the discussions to determine which proposals to recommend for funding. Additionally, together with one other team member, I rewrote the program solicitation, and I helped manage a budget of $16 million.

- Further, I was the lead member of the 2001-2002 DMS Management Team of three for the Faculty Early Career Development program (CAREER), a Foundation-wide activity that offers the NSF's most prestigious awards in support of the early career-development activities of those teacher-scholars who most effectively integrate research and education within the context of the mission of their organization. Our team convened a panel of experts to assess all the proposals within the Mathematical Sciences; I chaired the panel, and together with the other two team members, we made recommendations whether to fund or decline each proposal.

Other Leadership and Innovation

- As Seminar Leader of "Quadratic Reciprocity and Continued Fractions," in the 1995 Summer Mills Institute, I developed course materials for students to solve problems in teams (as later published as a chapter in the book "Women in Mathematics: Scaling the Heights"). This Institute, held at UC Berkeley, was a National Science Foundation and National Security Agency sponsored program for talented undergraduate women.

- At University of Colorado, I was "Calculus I Czar" at least 5 times. This entailed organizing and overseeing at least 12 sections of Calculus I (27-35 students per section), with 1 section taught by myself and the others taught by selected graduate students. I involved the graduate students in the selection of homework problems, and in the writing and grading of the common exams. I used the (rather lengthy) process of writing a draft of each exam, incorporating the graduate students' contributions, then discussing with them how I needed to rewrite the exam so that we could assess all levels of student accomplishment. Also, I observed each graduate student instructor in their classrooms, then discussed with each of them the strengths of her/his instruction and how some aspects might be improved or enhanced.

- As Undergraduate Chair at University of Colorado, I led a cirriculum review and subsequently revised graduation requirements. Also as a consequence of this, I developed and taught a new introductory proof-writing course based on point-set topology.

- As Graduate Chair at University of Colorado, I introduced and led the Professional Development Seminar, meeting every few weeks with graduate students to help them prepare and critique job application materials, to conduct mock interviews, and to discuss a variety of professional topics.

- As Chair at University of Colorado, I secured the University's agreement for a post-doctoral position (previous to this, the department had no post-doctoral fellows since the late 1970s). Additionally, I secured a $300,000 increase to the department's annual salary pool (28 departmental faculty).

- At Bristol, I introduced and run an annual panel to discuss best practices, difficulties and successes in the teaching of mathematics. Additionally, I organized a workshop for graduate students on how to give a mathematics talk to undergraduates, and a workshop for graduate students on how to make a successful poster on mathematical research.

- As Head of Pure Mathematics at Bristol, I led the group in discussions regarding our hiring strategy; I also led the group in discussions on restructuring our 1st year courses, and I oversaw the restructuring (writing and teaching one of the new courses, Foundations & Proof). I introduced two new units, Topics in Modern Geometry, and Topics in Discrete Mathematics, team-taught by post-doctoral fellows; for three years I organized and oversaw the team-teaching of Topics in Discrete Mathematics.

- In 2012, I helped create and organize the first Building Bridges: EU/US Summer School + Workshop on Automorphic Forms and Related Topics, held at the University of Aachen, Germany (with funding from National Science Foundation and University of Aachen). In 2014, I was the main organizer of the second Building Bridges, held at the University of Bristol (with funding from National Science Foundation, London Mathematical Society, Clay Mathematics Institute, and Heilbronn Institute for Mathematical Research). In 2016, I was a co-organizer of the third Building Bridges, held at the University of Sarajevo (with funding from National Science Foundation, European Mathematical Society, Heilbronn Institute for Mathematical Research, Foundation Compositio, Number Theory Foundation, and the University of Sarajevo School of Economics, together with administrative support from the American Instutite of Mathematics).

Research Interests

- automorphic forms (including integral and half-integral weights, holomorphic and non-holomorphic, Hilbert, Siegel, Jacobi, Hilbert-Siegel, Hilbert-Jacobi, and forms over function fields)

- Hecke operators

- lattices and quadratic forms over number fields and function fields, particularly their representation numbers and associated Siegel and Jacobi theta series

Professional Memberships

- American Mathematical Society
- London Mathematical Society
- Association for Women in Mathematics
- European Women in Mathematics

Grants and Awards

- National Science Foundation Research Award (May 1991 – April 1994; travel + summer salary each year)

- National Security Agency Research Award (November 1993 – October 1995; $13,000$ USD)

- National Science Foundation Visiting Professorship for Women Award (August 1997 – July 1998; travel + conference funding + full salary for 1 year)

- National Science Foundation Conference Award (with David Farmer, 2003)

- Inaugural Fellow of the American Mathematical Society (2013)

- London Mathematical Society-Clay Mathematics Institute Research School Award (summer 2014; $31,000$ GBP)

- Clay Mathematics Institute Enhancement Award (summer 2014; $16,250$ GBP)

- Heilbronn Institute for Mathematical Research Conference Award (with Jonathan Bober; $20,000$ GBP)

- London Mathematical Society British Mathematical Colloquium Award (with Tim Dokchitser, March 2016, $13,000$ GBP)

- Clay Mathematics Institute Enhancement Award (with Tim Dokchitser, March 2016, $7,000$ USD)

- Heilbronn Instutite for Mathematical Reasearch (with Tim Dokchitser, March 2016, $6,000$ GBP)

- European Mathematical Society Summer School Award (with Lejla Smajlovic, summer 2016; $6,000$ EUR)

- Heilbronn Institute for Mathematical Research Summer School Award (summer 2016; $5,000$ GBP))

- Foundation Compositio Conference Award (summer 2016; $4,000$ EUR)

- Number Theory Foundation Summer School Award (summer 2016; $3,000$ USD)

- University of Bristol Research Fellowship (September 2016 – August 2017; essentially, a full-year sabbatical, designed particularly for faculty having served in heavy administrative positions)

- Heilbronn Institute for Mathematical Research Summer School Award (summer 2018; $5,000$ GBP))

- Foundation Compositio Conference Award (summer 2018; $4,000$ EUR)

- Number Theory Foundation Summer School Award (summer 2018; 3,000 USD)
- Journal of Number Theory Summer School Award (summer 2018; 3,000 USD)

Research Publications

1. *Hecke operators on theta series attached to lattices of arbitrary rank*, Acta Arith. **54** (1990), 213-240.

2. *On lifting Hecke eigenforms*, Trans. A.M.S. **328** (1991), 881-896.

3. *Relations on representation numbers of quadratic forms*, Pacific J. Math. **151** (1991), 179-200.

4. *Hecke eigenforms and representation numbers of arbitrary rank lattices*, Pacific J. Math. **156** (1992), 371-394.

5. (with T.R. Shemanske) *On the Shimura lift for Hilbert modular forms*, in "A Tribute to Emil Grosswald: Number Theory and Related Analysis," AMS Contemporary Mathematics, 1993.

6. (with T.R. Shemanske) *Twists of Hilbert modular forms*, Trans. AMS **338** (1993), 375-403.

7. *A remark on differences of theta series*, J. Number Theory **48** (1994), no. 2, 243-251.

8. *On cuspidal eigenforms constructed from theta series* in "Markoff Spectrum and Diophantine Approximation and Analytic Number Theory," Marcel Dekker, 1993.

9. *The Eichler Commutation Relation for theta series with spherical harmonics*, Acta Arith. **63** (1993), no. 3, 233-254.

10. (with K.D. Merrill) *Sums of squares over function fields*, Duke J. of Math **71** (1993), 665-684.

11. (with T.R. Shemanske) *Determining multiplicities of half-integral weight newforms*, Pacific J. of Math. (1995).

12. (with K.D. Merrill) *Quadratic reciprocity over function fields,* Pacific J. of Math. **173** (1996), 147-150.

13. *Explicit Siegel theory: an algebraic approach*, Duke Math. J. **89** (1997), 37-74.

14. (with J.L. Hafner) *Eisenstein series and indefinite quadratic forms,* Forum Math. **11** (1999), 313-348.

15. (with J. Hoffstein and K.D. Merrill) *Automorphic forms and sums of squares over function fields*, J. Number Theory **79** (1999), 301-329.

16. (with J.L. Hafner) *Average Fourier coefficients for degree 2 Siegel modular forms*, Conference Proceedings of the Millenium Conference on Number Theory for the millennium, II (Urbana, IL, 2000), 117-148, 2002.

17. (with J.L. Hafner) *Explicit action of Hecke operators on Siegel modular forms*, J. Number Theory **93** (2002), 34-57.

18. (with R. Scharlau) *A weak multiplicity-one theorem for Siegel modular forms*, Pacific J. Math. **211, no. 2** (2003), 369-374.

19. *On bounding Hecke-Siegel eigenvalues*, J. Number Theory **117** (2006), 387-396.

20. *Action of Hecke operators on Siegel theta series I*, International J. Number Theory **2, No. 2** (2006), 169-186.

21. (with S. Caulk) *Hecke operators on Hilbert-Siegel modular forms*, Int. J. Number Theory **3, No. 3** (2007), 391-420.

22. *Action of Hecke operators on Siegel theta series II*, Int. J. Number Theory **4, No. 6** (2008), 981-1008.

23. *Restricting Hecke-Siegel operators to Jacobi modular forms* J. Number Theory **129, No. 7** (2009), 1709-1733.

24. *On a reciprocity theorem of Gauss* in "Quadratic Forms - algebra, arithmetic, and geometry," 391-397, Contemporary Mathematics 493 (Providence, Rhode Island, 2009).

25. (with T. Shemanske, S. Treneer) *Constructing simultaneous Hecke eigenforms* Int. J. Number Theory **6, No. 5** (2010), 1117-1137.

26. *Hecke eigenvalues and relations for degree 2 Siegel Eisenstein series,* J. Number Theory **132, No. 11** (2012), 2700-2723.

27. *A formula for the action of Hecke operators on half-integral weight Siegel modular forms and applications,* J. Number Theory **133, No. 5** (2013), 1608-1644.

28. *Hecke eigenvalues and relations for Siegel Eisenstein series of arbitrary degree, level, and character*, Int. J. Number Theory **13, No. 2** (2017), 325-370; arXiv:1412.4588.

29. *Hecke operators on half-integral weight Siegel Eisenstein series*, Int. J. Number Theory **13, No. 9** (2017), 2335-2372; arXiv:1605.09292.

30. *Some relations on Fourier coefficients of degree 2 Siegel forms of arbitrary level*, J. Number Theory **180** (2017), 349-359; arXiv:1608.00158.

31. *Explicitly realizing average Siegel theta series as linear combinations of Eisenstein series*, Ramanujan J. Math. (to appear); arXiv:1702.06494.

32. *Higher level quadratically twisted Gauss sums and totally isotropic subspaces*, submitted, 16 pages; arXiv:1708.07978.

33. (with Dan Fretwell) *Hecke operators on Hilbert-Siegel theta series*, manuscript in preparation.

34. (with Dan Fretwell) *Comparitive magnitudes of cusp forms, Klingen-Eisenstein series, and Siegel-Eisenstein series in arbitrary degree*, work in progress.

Books

1. (with J. Jorgenson) Eds., "The Ubiquitous Heat Kernel," Contemporary Mathematics **398** (Providence, Rhode Island, 2006), 402 pages.

2. (with J. Jorgenson and L. Smajlovic) Eds., "Proceedings of the 3rd EU/US Summer School and Workshop on Automorphic Forms and Related Topics," Contemporary Mathematics (in progress).

3. (with Steven J. Miller et. al.) Eds., "Proceedings of Workshops on Automorphic Forms and Related Topics," Journal of Number Theory (contracted).

Invited Addresses at International Conferences

1. "Some arithmetic relation on representation numbers of quadratic forms," Special Session, Regional AMS Meeting, UC Santa Barbara, California, November 1991.

2. "Lifting Hecke eigenforms," Conference to celebrate the 80th birthday of Joseph Lehner, Swarthmore College, Pennsylvania, October 1992.

3. "Spectral decomposition and sums of squares," Special Session, AMS Regional meeting, Manhattan Kansas, March 1994.

4. "Explicit Siegel theory," Plenary Address, Canadian Number Theory Association International Conference, Halifax, Nova Scotia, July 1994.

5. "Spectral theory and sums of squares over function fields," Special Session, Regional AMS Meeting, Oklahoma State University, October 1994.

6. "Automorphic forms and sums of squares over function fields," International Conference on Analytic Number Theory (in honor of Heine Halberstam), University of Illinois Urbana-Champaigne, May 1995.

7. "Siegel modular forms and Hecke operators," Conference on Modular Forms, Oberwolfach Germany, December 1998.

8. "Siegel forms, quadratic forms and Hecke operators," Special Session, Regional AMS meeting, University of Illinois Urbana-Champaigne, March 1999.

9. "Modular forms, quadratic forms, and Hecke operators," Plenary Address, Sectional AMS Meeting, Las Vegas, April 2001.

10. "Eigenvalues of Hecke operators on Siegel modular forms," Special Session, Sectional AMS Meeting, Salt Lake City Utah, October 2002.

11. "Hecke operators on Siegel modular forms" and "Applications of Hecke operators in Siegel modular forms," Plenary Addresses, KIAS and Postech University Workshop on Modular Forms, KIAS, Seoul Korea, December 2002.

12. "Quadratic forms and automorphic forms," Plenary Address, First International Conference of the Korean Women in Mathematical Sciences, KIAS, Seoul Korea, June 2004.

13. "Hecke operators on Siegel theta series," Conference on Modular Forms, Oberwolfach Germany, November 2007.

14. "On a reciprocity theorem of Gauss," International Conference on the Algebraic and Arithmetic Theory of Quadratic Forms 2007, Lake Llanquihue, Chile, December 2007.

15. "Siegel modular forms, Hecke operators, and L-series," International Workshop: Computations with Modular Forms, Bristol UK, August 2008.

16. "Quadratic forms, Siegel modular forms, and a Hecke correspondence," International Conference on Mock Theta Functions, Max Planck Institut, Bonn Germany, May 2009.

17. "Interplay between Siegel modular forms and quadratic forms," Joint Meeting of the Korean Mathematical Society and the American Mathematical Society, December 2009.

18. "Hecke operators on degree 2 Siegel-Eisenstein series of square-free level," Automorphic Forms: Advances and Applications, Centre International de Rencontres Mathématique, Luminy France, May 2011.

19. "Hecke Operators on Degree 2 Eisenstein Series and Higher Representation Numbers," Conference on Automorphic forms and L-functions, Research Institute for Mathematical Sciences, Kyoto Japan, January 2012.

20. "Hecke Operators on Siegel Eisenstein Series," Explicit Theory of Automorphic Forms, Tangji University, Shanghai China, March 2014.

21. "Hecke Operators on Siegel Eisenstein Series of Integral and Half-integral weights," Automorphic Forms and Arithmetic (Satellite Conference for ICM 2014), POSTECH, Pohang South Korea, August 2014.

22. "Explicit action of Hecke operators on half-integral weight Siegel Eisenstein series," Explicit Methods in Number Theory: Conference in Honour of Cremona's 60th Birthday, April 2016.

23. "Representation numbers and the Eichler Commutation Relation," Southern New England Conference on Quadratic Forms and Modular Forms, June 2016.

Diversity and Outreach Presentations

1. "Gauss sums and taxi cabs in New York City," Undergraduate Colloquium, Sonoma State University, California, April 1988.

2. "What it's like to be a woman mathematician," St. Aloysius College, Adelaide, South Australia, August 1991.

3. "Being a woman mathematician," West View Middle School, Longmont Colorado, November 1993.

4. "Being a woman mathematician - and surviving," Centurion High School, Lafayette Colorado, December 1994.

5. "Number theory and induction" (a series of 3 talks), Larkspur Middle School, Larkspur California, Fall 1997.

6. "Lattices and sums of squares," Carlton College Summer Program Colloquium, Minnesota, July 1998.

7. "Poisson summation and quadratic reciprocity" (a series of 2 talks), Mathematics program for talented high shcool students, City College, New York, July 2001.

8. "Women in Mathematics: Participating, Surviving, and Succeeding," Conference in Honor of Audrey Terras, UC San Diego, California, September 2002. http://www.maths.bris.ac.uk/~malhw/women-surviving.pdf

9. Panel Presentation, "Mentoring", for *Encouraging and Retaining Women and Other Underrepresented Groups*, 18th Annual Workshop on Automorphic Forms and Related Topics, UC Santa Barbara, California, March 2004. http://www2.maths.bris.ac.uk/~malhw/afw-panel-04.pdf

10. "Poisson summation and sums of squares," Clemson College REU Colloquium, South Carolina, July 2004.

11. Panel Presentation, "The continuing Struggle for Equity as Women in Mathematics," for *Women's Role in Mathematics*, The First International Conference of the Korean Women in Mathematical Sciences, KIAS, Seoul Korea, June 2004. http://www2.maths.bris.ac.uk/~malhw/korea-panel.pdf

12. Panel Presentation, "Battling apathy and offering opportunity," for *Challenges in Undergraduate Education*, National meeting of the AMS Committee on Education, Washington D.C., October 2004.
http://www2.maths.bris.ac.uk/ malhw/ug-education.pdf

13. "Women in Mathematics: Participating, Surviving, and Succeeding," Concurrent Session, Conference on World Affairs, University of Colorado-Boulder, April 2005. http://www2.maths.bris.ac.uk/~malhw/women.pdf

14. "Ambition and the Female Mathematician," University of Heidelberg, January 2010. http://www.maths.bris.ac.uk/~malhw/ambition-women.pdf

15. "Women in Mathematics: Ambition in an ambivalent society," University of Nottingham, March 2015;
(slides) http://www2.maths.bris.ac.uk/~malhw/women-bmr-nopauses.pdf,
(youtube) https://www.youtube.com/watch?v=-FQWpfZIPT8

16. "The art and beauty of pure mathematics," University of Bristol's Best of Bristol lecture series, June 2016;
(slides) http://www.maths.bris.ac.uk/~malhw/BoB.pdf,
(youtube) https://www.youtube.com/watch?v=XoKIfCgiA(UNDERSCORE)w

Conferences Organized

1. (co-organizer, with Dorothy Wallace) 4th Annual Workshop on Automorphic Forms and Related Topics, Dartmouth College, New Hampshire, January 1990.

2. 6th Annual Workshop on Automorphic Forms and Related Topics, University of Colorado, Boulder, March 1992 (with support from UC Boulder Center for Number Theory).

3. (co-organizer, with Daniel Bump) 7th Annual Workshop on Automorphic Forms and Related Topics, Stanford University, Cailfornia, March 1993.

4. (co-organizer, with Jeffrey Stopple) 8th Annual Workshop on Automorphic Forms and Related Topics, UC Santa Barbara, California, March 1994.

5. 11th Annual Workshop on Automorphic Forms and Related Topics, University of Colorado, Boulder, March 1997 (with support from UC Boulder Center for Number Theory).

6. Conference to Celebrate Women Mathematicians in Number Theory and Analysis, UC Berkeley, August 1997 (with support from National Science Foundation, UC Berkeley, and MSRI).

7. (co-organizer, with Daniel Bump) 12th Annual Workshop on Automorphic Forms and Related Topics, Stanford University, California, March 1998.

8. (co-organizer, with Jeffrey Stopple) 13th Annual Workshop on Automorphic Forms and Related Topics, UC Santa Barbara, California, March 1999.

9. (co-organizer, with Rudolf Scharlau) 14th Annual Workshop on Automorphic Forms and Related Topics, University of Colorado, Boulder, March 2000 (with support from UC Boulder Center for Number Theory).

10. 17th Annual Workshop on Automorphic Forms and Related Topics, University of Colorado, Boulder, March 2003 (with support from UC Boulder Center for Number Theory).

11. (co-organizer, with Jay Jorgenson) *The Ubiquitous Heat Kernel*, Special Session, Sectional AMS Meeting, University of Colorado-Boulder, October 2003.

12. (co-organizer, with Suzanne Caulk and Richard Hill) 20th Annual Workshop on Automorphic Forms and Related Topics, University of Colorado, Boulder, March 2006 (with support from UC Boulder Center for Number Theory).

13. (co-organizer, with Aloys Krieg, Martin Raum, and Olav Richter) Building Bridges: 1st EU/US Summer School + Workshop on Automorphic Forms and

Related Topics, University of Aachen, June 2012 (with support from National Science Foundation and Univeristy of Aachen).

14. (co-organizer, with Jennifer Beineke and Jonathan Bober) Building Bridges: 2nd EU/US Summer School + Workshop on Automorphic Forms and Related Topics, University of Bristol, July 2014 (with support from National Science Foundation, London Mathematical Society, Clay Mathematics Institute, Heilbronn Institute for Mathematical Research).

15. (co-organizer, with Tim Dokchitser) 2016 British Mathematics Colloquium, University of Bristol, March 2016 (with support from London Mathematical Society, Clay Mathematics Institute, Foundation Compositio, Heilbronn Institute for Mathematical Research).

16. (co-organizer, with Jay Jorgenson and Lejla Smajlovic) Building Bridges: 3rd EU/US Summer School + Workshop on Automorphic Forms and Related Topics, University of Sarajevo, July 2016 (with support from National Science Foundation, European Mathematical Society, Heilbronn Institute for Mathematical Research, Foundation Compositio, Number Theory Foundation, University of Sarajevo).

Graduate Students Supervised

- Amnon Ben-Pazi, master's student, spring 1992
- John McNamee, master's student, spring 1992
- Jennifer Taggart, master's student, spring 1993
- Deanne Estep, master's student, fall 1995
- Carl Lienert, doctoral student, 1995-1998
- Suzanne Caulk, master's student, spring 1997
- Suzanne Caulk, doctoral student, 1998-2002
- Michael Daniel, doctoral student, 2003-2006
- Cayman Seacrest, master's student, fall 2006
- Maria Teider, doctoral student, 2008-2012
- Martin Dickson, doctoral student, 2011-2015
- Robbie Coats, MSc student, summer 2014

Courses Taught (class sizes ranging from 3 to 310 students)

- Quantitative Reasoning and Mathematical Skills
- Business Calculus
- Calculus I, II, and III
- Foundations & Proof
- Linear Algebra
- Linear Programming
- Abstract Algebra
- Introduction to Number Theory
- Point-set Topology
- Real Analysis
- Projects/Independent Study
- Galois Theory (undergraduate and graduate levels)
- Graduate Commutative Algebra
- Graduate Algebra
- Graduate Number Theory
- Graduate Modular Forms
- Graduate Complex Analysis
- Graduate Advanced Topics in Number Theory

Significant Course Development

- *Quadratic reciprocity and continued fractions* in "Women in Mathematics: Scaling the Heights," ed. Deborah Nolan, MAA Notes, volume 46, 1997, p. 81-86.

- *A Beginning Course in Arithmetic and Number Theory*, A Quantitative Reasoning and Mathematical Skills Workbook.
  http://people.maths.bris.ac.uk/∼malhw/qrms.pdf

- Calculus 1 Weekly Workshops.
  http://people.maths.bris.ac.uk/∼malhw/workshops.pdf

- Professional Development Seminar for Mathematics Graduate Students.

- Linear Algebra & Geometry (Introductory Linear Algebra; wrote new lecture notes, exercises, and solutions).

- Algebra 2 (Introductory Commutative Algebra; wrote new lecture notes, exercises, and solutions). Course notes:
  http://people.maths.bris.ac.uk/ malhw/Alg2Notes-2015.pdf

- Foundations & Proof (created the course and course materials, including lecture notes, exercises, and solutions). Course notes:
  http://people.maths.bris.ac.uk/∼malhw/FandP-lectures.pdf

- Galois Theory (with Trevor Wooley, wrote new lecture notes, exercises, and solutions). Course notes:
  http://people.maths.bris.ac.uk/∼malhw/GT-lectures.pdf