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## CURRICULUM VITAE 2018

Lillian B. Pierce

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### CONTACT INFORMATION

email: pierce@math.duke.edu

mail: Box 90320, Durham, NC 27708

webpage: [www.math.duke.edu/~pierce](http://www.math.duke.edu/~pierce)

### CURRENT EMPLOYMENT

**Institute for Advanced Study**, von Neumann Fellow 2017–2018

**Duke University**, Associate Professor 2017 – present

### PREVIOUS PROFESSIONAL POSITIONS

**Duke University**, Assistant Professor 2014 – 2017

**Hausdorff Center for Mathematics**, Bonn Junior Fellow 2013 – 2015 (on leave 2014 – 2015)

**Duke University**, Research Scholar 2013 – 2014

**University of Oxford** 2010 – 2013

NSF Mathematical Sciences Postdoctoral Research Fellow, Jan 2013 – Jun 2013

Marie Curie Incoming International Fellow, Aug 2010 – Jan 2013

**Wolfson College, University of Oxford**, Research Fellow Jul 2010 – Jun 2013

**Institute for Advanced Study**, Princeton, Member Jul 2009 – Jul 2010

NSF Mathematical Sciences Postdoctoral Research Fellow, Simonyi Fund

### EDUCATION

**Princeton University** Ph.D. in Mathematics 2009

**University of Oxford** M.Sc. by Research in Mathematics 2004

**Princeton University** B.A. in Mathematics *summa cum laude*, valedictorian 2002

### RESEARCH INTERESTS

Analytic number theory and harmonic analysis: character and exponential sums, the circle method, integral and rational points on varieties, class numbers, Burgess methods, sieve methods, oscillatory integrals, Carleson operators, Radon transforms, discrete operators.

### PUBLICATIONS

20. An effective Chebotarev density theorem for families of number fields, with an application to  $\ell$ -torsion in class groups  
with C. Turnage-Butterbaugh and M. M. Wood (arXiv:1709.09637).
19. The Vinogradov Mean Value Theorem (after Wooley, and Bourgain, Demeter and Guth),  
Bourbaki Seminar, *Astérisque*, to appear (2017).
18. Endpoint Sobolev and BV continuity for maximal operators  
with E. Carneiro, J. Madrid, *J. Functional Analysis*, **273** (2017) 3262–3294.
17. Polynomial Carleson operators along monomial curves in the plane  
with S. Guo, J. Roos, and P.-L. Yung, *J. Geometric Analysis*, (2017)  
<https://doi.org/10.1007/s12220-017-9790-7> (1–36).
16. On  $\ell$ -torsion in class groups of number fields  
with J. Ellenberg and M. Matchett Wood, *Algebra and Number Theory*, **11** (8) Jan (2017) 1739–1778.

15. A polynomial Carleson operator along the paraboloid with P.-L. Yung, *Revista Mat. Ibero.*, to appear.
14. Averages and moments associated to class numbers of imaginary quadratic fields with D.R. Heath-Brown, *Compositio Math.*, **153** (2017) 2287–2309.
13. Simultaneous integer values of pairs of quadratic forms with D.R. Heath-Brown, *J. Reine Angew. Math. (Crelle)*, 727 (2017) 85–143.
12. Burgess bounds for multi-dimensional short mixed character sums *Journal of Number Theory*, **163** (2016) 172–210.
11. Lower bounds for the truncated Hilbert transform with R. Alaifari and S. Steinerberger, *Revista Matemática Iberoamericana.*, **32** no. 1 (2016) 23–56.
10. Representations of integers by systems of three quadratic forms with D. Schindler and M. Matchett Wood, *Proc. London Math. Soc.* (3) **113** (2016) 289–344.
9. Burgess bounds for short mixed character sums with D.R. Heath-Brown, *J. London Math. Soc.*, **91** no. 3 (2015) 693–708.
8. Counting rational points on smooth cyclic covers with D.R. Heath-Brown, *Journal of Number Theory*, **132** (2012) 1741–1757.
7. Discrete fractional Radon transforms and quadratic forms *Duke Math. Journal* **161** no. 1 (2012) 69–106. Correction, **162** (2013) 1203–1204.
6. On a discrete version of Tanaka’s theorem for maximal functions with J. Bober, E. Carneiro, K. Hughes, *Proceedings of the Amer. Math. Soc.* **140** (2012) 1669–1680.
5. A note on discrete fractional integral operators on the Heisenberg group *Internat. Math. Res. Not.* **2012** no. 1 (2012) 17–33.
4. On discrete fractional integral operators and mean values of Weyl sums *Bull. London Math. Soc.* **43** (2011) 597–612.
3. A note on discrete twisted singular Radon transforms *Mathematical Research Letters* **17** no. 4 (2010) 701–720.
2. A Bound for the 3-part of class numbers of quadratic fields by means of the square sieve *Forum Math.* **18** (2006) 677–698.
1. The 3-part of class numbers of quadratic fields *J. London Math. Soc.* (2) **71** (2005) 579–598.

## RESEARCH FUNDING

2017 – 2022 NSF DMS-1652173 CAREER Grant

2018 – 2021 AIM SQuaRE grant, research in harmonic analysis

2014 – 2017 NSF DMS-1402121 equally funded by Algebra & Number Theory and Analysis panels

2010 – 2013 Marie Curie Incoming International Fellowship, European Commission

2012 – 2013 EPSRC Developing Leaders Award held by Oxford (for returning carers)

2009 – 2013 NSF Mathematical Sciences Postdoctoral Research Fellowship

2008 – 2009 Fund for Innovation in Undergraduate Education, Princeton 250th Anniversary Fund

2004 – 2008 Centennial Fellowship, Princeton University Graduate School

2007 – 2008 Princeton University Assistant in Research

2004 – 2007 NSF Graduate Research Fellowship

## VISITING POSITIONS

2017 - 2018 von Neumann Fellow, IAS

2017 - 2021 Bonn Research Fellow, Hausdorff Center for Mathematics, Bonn

2017 (May) MSRI, Research Member, Analytic Number Theory and Harmonic Analysis Programs  
2016 (August) Max Planck Institute, Bonn

### FELLOWSHIPS AND AWARDS

2018 Sloan Research Fellow  
2018 AWM-Sadosky Research Prize in Analysis  
2017 – 2021 Bonn Research Fellowship, Hausdorff Center for Mathematics  
2017 – 2018 von Neumann Fellowship, IAS  
2010 – 2013 Marie Curie Incoming International Fellowship  
2009 – 2013 NSF Mathematical Sciences Postdoctoral Research Fellowship  
2009 – 2010 Support at the IAS from the Simonyi Fund  
2004 – 2008 Centennial Fellowship, Princeton University  
2004 – 2007 NSF Graduate Research Fellowship  
2002 Rhodes Scholar  
2002 Recipient of Marshall Scholarship (declined)  
2002 Valedictorian, Princeton University (highest academic achievement)  
2002 M. Taylor Pyne Honor Prize co-winner, Princeton University (highest undergraduate distinction)  
2002 Miller Prize, Princeton University (excellence in mathematical research)  
2001 Class of 1939 Princeton Scholar Award co-winner, Princeton University (best 3rd year student)  
2001 Barry M. Goldwater Scholar (national academic merit fellowship for outstanding research)  
2001 USA Today All-USA College Academic First Team (top 20 college students in the USA)  
2001 One of Glamour Magazine's Top Ten College Women  
1999 & 2000 President's Award for Academic Achievement, Princeton University  
1999 Freshman First Honor Prize, Princeton University (best 1st year student)

### PLENARY TALKS

127. Jun 2017 Nicolas Bourbaki seminar, Paris
126. Jan 2017 MAA Invited Address at the Joint Math Meetings 2017, Atlanta
125. Jun 2016 Canadian Number Theory Association XIV, University of Calgary
124. Oct 2015 Southeastern Conference for Undergraduate Women in Mathematics, Duke University
123. Sep 2015 Heilbronn Institute for Mathematical Research, Annual Conference
122. Mar 2015 Southeast Analysis Meeting, UGA
121. Dec 2014 Palmetto Number Theory Series (PANTS XXIII) USC Columbia

### COLLOQUIA

120. May 2018 (upcoming) University of Maryland Colloquium
  119. April 2018 (upcoming) Bryn Mawr Colloquium
  118. Dec 2017 Rutgers Colloquium
  117. May 2017 UCLA Distinguished Women in Math Colloquium
  116. Mar 2017 IU Colloquium
  115. Mar 2017 UW Madison Colloquium
  114. Jan 2017 Brown University Colloquium
  113. Dec 2016 Stony Brook University Colloquium
  112. Oct 2015 UC Boulder Kempner Colloquium
  111. May 2015 UT Austin Colloquium, Distinguished Women in Math series
  110. Jan 2014 Berlin Mathematical School Kovalevskaya Colloquium
  109. Jan 2014 University of Göttingen Colloquium
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108. Jan 2013 Caltech Colloquium
107. Jan 2013 UIUC Colloquium
106. Jan 2013 UW Madison Colloquium
105. Dec 2012 UC Berkeley Colloquium
104. Nov 2012 Indiana University at Bloomington Colloquium
103. Apr 2010 Dartmouth Colloquium
102. Jan 2010 UCSB Colloquium

#### INVITED CONFERENCES AND PRESENTATIONS

101. May 2017 MSRI Recent Developments in Analytic Number Theory
100. Nov 2016 Oberwolfach, Analytic Number Theory
99. Jun 2015 Quantitative Arithmetic Geometry, Institut Mittag-Leffler
98. Apr 2015 AWM Research Symposium, Special Section in Number Theory, U Maryland
97. Dec 2014 CRM Montreal: New Approaches in Probabilistic and Multiplicative Number Theory
96. Oct 2014 Clay Math Institute Workshop at Oxford: Analytic Number Theory
95. Jul 2014 Oberwolfach: Real Analysis, Harmonic Analysis, and Applications
94. Jun 2014 Bateman Number Theory Conference, Illinois
93. May 2014 Humboldt University Berlin: Moduli and Automorphic Forms
92. Mar 2014 Lausanne/Zürich Number Theory Days, ETH
91. Nov 2013 Max Planck Institute Bonn/B-IT Workshop on Number Theory and Cryptography
90. Oct 2013 Oberwolfach Workshop on Analytic Number Theory
89. Jun 2013 FOUVRY60 Analytic Number Theory, Luminy, France
88. Apr 2013 Denmark Mathematical Society 140th Anniversary
87. Jan 2013 Number Theory Seminar, AWM Workshop, Joint Mathematics Meetings, San Diego
86. Jun 2012 Analytic Methods for Diophantine Problems, Mathematisches Institut, Göttingen
85. Jun 2011 Workshop on Oscillatory Integrals, Edinburgh
84. Feb 2011 Harmonic Analysis Workshop, Edinburgh
83. Nov 2010 Exponential Sums over Finite Fields and Applications, ETH Zürich
82. Oct 2008 American Mathematical Society Sectional Conference, Vancouver BC
81. Feb 2008 New Trends in Harmonic Analysis Conference, Fields Institute, Toronto, Canada
80. Apr 2007 American Mathematical Society Sectional Conference, New Jersey
79. Jun 2005 Gauss-Dirichlet Conference, Mathematisches Institut, Göttingen (contributed talk)
78. May 2002 Program for Women in Mathematics, Institute for Advanced Study, Princeton

#### INVITED RESEARCH SEMINARS

77. May 2018 (upcoming) Princeton Number Theory Seminar
  76. May 2018 (upcoming) MIT Analysis Seminar
  75. Apr 2018 (upcoming) Princeton Analysis Seminar
  74. Mar 2018 (upcoming) IAS Analysis Seminar
  73. Mar 2017 U Michigan Number Theory Seminar
  72. Feb 2017 BC-MIT Number Theory Seminar
  71. Jan 2017 Emory Number Theory Seminar
  70. Jan 2017 UGA Discrete Analysis Seminar
  69. Dec 2016 Rutgers Seminar
  68. Dec 2016 Montreal Number Theory Seminar
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67. Dec 2016 Stanford Number Theory Seminar
  66. Oct 2016 UIC Number Theory Seminar
  65. Jul 2016 Max Planck Institute Number Theory Seminar, Bonn
  64. May 2016 IAS/Princeton Number Theory Seminar
  63. Jan 2016 Caltech/UCLA Analysis Seminar
  62. Jan 2016 Caltech Number Theory Seminar
  61. Oct 2015 UC Boulder Number Theory Seminar
  60. May 2015 Princeton University Analysis Seminar
  59. May 2015 UT Austin Analysis Seminar
  58. Feb 2015 UNC Chapel Hill Analysis Seminar
  57. Jan 2015 UW Madison Number Theory Seminar
  56. Feb 2014 Duke University Number Theory Seminar
  55. Dec 2013 Max Planck Institute, Bonn, Number Theory Seminar
  54. Dec 2013 University of Cologne Number Theory Seminar
  53. May 2013 Cambridge Discrete Analysis Seminar
  52. Jan 2013 UMinn Special Lecture
  51. Jan 2013 MIT Analysis Seminar
  50. Jan 2013 MIT Number Theory Seminar
  49. Jan 2013 McGill Special Lecture
  48. Dec 2012 Hausdorff Center for Mathematics, Bonn, Seminar
  47. Dec 2012 Rutgers University Seminar
  46. Dec 2012 UC Berkeley Number Theory Seminar
  45. Dec 2012 Washington University in St. Louis Seminar
  44. Nov 2012 UCSD Analysis Seminar
  43. Nov 2012 UCSD Number Theory Seminar
  42. Nov 2012 Georgia Tech Analysis Seminar
  41. Nov 2012 Warwick University Number Theory Seminar
  40. Oct 2012 Duke University Special Seminar
  39. Oct 2012 Reading University Analysis Seminar
  38. Jun 2012 University of Cologne Number Theory Seminar
  37. Jun 2011 Oxford OxpDE Analysis Seminar
  36. Apr 2011 UCLA Analysis Seminar
  35. Apr 2011 UCSD Analysis Seminar
  34. Apr 2011 Caltech Number Theory Seminar
  33. Mar 2011 University of Birmingham (England) Analysis Seminar
  32. Jan 2011 University of Bristol Analysis Seminar
  31. Dec 2010 University of Bristol Heilbronn Number Theory Seminar
  30. Dec 2010 University of Cardiff Analysis Seminar
  29. Nov 2010 UCL Pure Mathematics Seminar
  28. Apr 2010 Dartmouth Number Theory Seminar
  27. Apr 2010 MIT Number Theory Seminar
  26. Mar 2010 IAS Members Seminar, Institute for Advanced Study
  25. Oct 2009 IAS Short Talks by New Members, Institute for Advanced Study
  24. Nov 2008 Brown University Analysis Seminar
  23. Jun 2008 Oxford University Number Theory Seminar
  22. May 2008 University of Wisconsin at Madison, Analysis Seminar
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21. Apr 2008 Stony Brook University Analysis Seminar
20. Jan 2007 University of Bordeaux Number Theory Seminar
19. Apr 2006 Brown University Number Theory Seminar
18. Mar 2006 Ohio State University Number Theory Seminar
17. Jun 2005 Columbia University Number Theory Seminar
16. Apr 2005 UCLA Number Theory Seminar
15. Mar 2005 Caltech Number Theory Seminar
14. Mar 2005 University of Indiana at Bloomington Algebra Seminar
13. Mar 2005 University of Wisconsin at Madison Algebra and Number Theory Seminar
12. Feb 2005 Princeton University Seminar Course in Analysis
11. Dec 2004 Courant Institute Number Theory Seminar
10. Nov 2004 Royal Holloway College Pure Mathematics Seminar
9. Nov 2004 University of Michigan Number Theory Seminar
8. Jun 2004 Oxford University Number Theory Seminar

### **PARTICIPATORY INVITED WORKSHOPS**

7. May 2015 AIM Workshop: Carleson Theorems and Multilinear Operators (co-organizer)
6. Nov 2014 AIM Workshop: Bounded Gaps between Primes
5. Apr 2014 WIN3 Workshop on Number Theory, Banff (project co-leader)
4. Oct 2006 AIM Workshop: Subconvexity bounds for  $L$ -functions
3. Nov 2005 AIM Workshop: Gaps between primes

### **MINICOURSES**

2. Jul 2011 Discrete Operators, Princeton Summer RTG Program in Analysis and Geometry (1 week)
1. Jun 2010 Binary Quadratic Forms, Princeton SWIM Summer Workshop in Mathematics (1 week)

### **EXPOSITORY TALKS**

8. Feb 2018 (upcoming) Mathematical Conversations, IAS
7. Feb 2016 Keynote speaker at FEMMES, Duke (240 girls in STEM, grades 4-6)
6. Aug 2015 guest speaker at Wake Forest University REU
5. Oct 2014 Grad/Faculty Seminar, Duke University
4. Jun 2013 Junior Number Theory Seminar, Oxford University
3. Mar 2013 Junior Number Theory Seminar, Oxford University
2. Oct 2012 Junior Number Theory Seminar, Oxford University
1. Jan 2011 Junior Number Theory Seminar, Oxford University

### **TEACHING**

- 2017 spring Duke University: Math 636: Analytic Number Theory (newly developed course)
- 2016 fall Duke University: Math 165FS Cryptography and Society (newly developed course)
- 2016 spring Duke University: Math 304 Introduction to Cryptography (newly developed course)
- 2016 spring Duke University (co-instructor, newly developed course):
- Baldwin Scholars Seminar: Sociology 180S, Self, Society, and the Natural World
- 2015 fall Duke University: Math 631 Real Analysis
- 2015 spring Duke University: Math 221 Linear Algebra and Applications
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2014 fall Duke University: Math 221 Linear Algebra and Applications  
2013 fall University of Bonn: Graduate Course in Harmonic Analysis  
2010 fall University of Oxford: Class Leader, Analytic Number Theory  
2008 fall Princeton University: Lecturer and course designer, MAT 218 (Intro. Real Analysis)  
awarded Princeton 250th Anniversary Fund for Innovation in Undergraduate Education  
Course designer and co-instructor for newly developed required core real analysis course.

### TEACHING RECOGNITION AND TRAINING

2009 Princeton University Award (APGA) for Teaching by a Graduate Student  
2008 – 2009 Princeton University: Teaching Transcript Program Certificate  
2006 Princeton University: Graduate Instructor, Princeton RTG Program in Analysis and Geometry  
Graduate Instructor for advanced course on Fourier analysis, with E. M. Stein.  
2005 – 2007 Princeton University: Teaching Assistant, MAT 330 series of advanced analysis courses  
Although not required to teach due to fellowship funding, volunteered to teach  
popular weekly problem sessions for advanced courses:  
MAT 330 Fourier Analysis (Spring 2005, Spring 2007);  
MAT 331 Complex Analysis (Fall 2005, Fall 2006, Fall 2007).  
2003 University of Oxford College Tutor (Oxbridge tutorial system) for Lady Margaret Hall College  
2003 University of Oxford: Teaching Assistant in Number Theory

### POSTDOCTORAL ADVISING

2015 – 2018 Duke University: Postdoctoral mentor to Dr. C. Turnage-Butterbaugh  
2013 – 2015 University of Bonn: Postdoctoral mentor to Dr. D. Schindler  
(subsequent posts: Member at IAS, tenure track at the University of Utrecht)

### UNDERGRADUATE ADVISING

2015 Duke University Summer Undergraduate Research: Runliang (Oscar) Li

### PhD THESIS COMMITTEES

2016 Thesis committee, D. Milovic, student of E. Fouvry and P. Stevenhagen,  
Orsay and Leiden  
2014 Thesis committee, R. Alaifari, student of Ingrid Daubechies and Michel Defrise,  
Vrije Universiteit Brussel

### PhD ORAL EXAM COMMITTEES

2016 Zhe Wang Oral Preliminary Exam, Duke University (Real Analysis)  
2016 Kevin Stubbs Oral Preliminary Exam, Duke University (Real Analysis)  
2016 Huong Tran Oral Preliminary Exam, Duke University (Real Analysis)

### CONFERENCE FUNDING

2016 & 2017 NSA Conference Grants (c. 27,000 USD, PI)  
2015 AIM Workshop funding  
2014 NSF Conference Grant DMS-1400237 (27,204 USD, Senior Personnel)  
2014 Clay Mathematics Institute Conference Grant (20,120 USD, PI)  
2014 Hausdorff Center for Mathematics Conference Grant (50,000 EUR, PI)  
Additional funding from Number Theory Foundation, Microsoft Research, and Duke University

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**ORGANIZATION: CONFERENCES**

- Jun 2017 Co-organizer of re:boot Number Theory 2017, Duke University  
National number theory research retreat for female faculty, funded by NSA-MSP, NSF, Number Theory Foundation, Duke University
- Feb 2017 Co-organizer of Connections for Women (Analytic Number Theory), MSRI
- Mar 2016 Co-organizer of re:boot Number Theory 2016, Duke University  
National number theory research retreat for female faculty, funded by NSF, Number Theory Foundation, NSA-MSP, Microsoft Research, Duke University
- May 2015 Co-organizer of AIM Workshop: Carleson Theorems and Multilinear Operators
- Jul 2014 Co-organizer of ELEFANT workshop, Hausdorff Center for Mathematics, Bonn  
Weeklong workshop with 23 speakers on cutting edge number theory research.  
Funded by HCM and DFG, with additional funding from Number Theory Foundation
- Jul 2014 Co-organizer of ENFANT workshop, Hausdorff Center for Mathematics, Bonn  
Two day workshop with short talks by 42 early-career researchers.
- Oct 2012 Founder and organizer of Oxford Number Theory Day (research retreat), Oxford University

**ORGANIZATION: SEMINARS AND SUMMER SCHOOLS**

- June 2018 (upcoming) Bonn Hausdorff Summer School on  $L$ -functions
- June 2018 (upcoming) AMS-MRC summer school in analysis,  
Harmonic Analysis: New Developments in Oscillatory Integrals
- Jun 2014 Co-organizer of 6th EWM/EMS Summer School on Apollonian Circle Packings  
Hosted by the Institut-Mittag-Leffler in Stockholm in partnership with the Clay Mathematics Institute, with additional funding from the EWM, EMS, NSF, CMI, and NTF
- May 2014 Co-organizer of Analysis Summer School at University of Bonn  
A Thiele summer school on Carleson Theorems and Radon-type behavior
- 2009 – 2010 Co-organizer of Postdoc Learning Group, Institute for Advanced Study  
Founder and co-organizer of seminar series focusing on expository presentations of classical methods.
- 2008 & 2009 Scientific Coordinator for Princeton Summer Program in Analysis and Geometry
- 2008 Advising Committee for SWIM Summer Workshop in Mathematics, Princeton

**ORGANIZATION: COMMITTEES**

- 2016 – present, Diversity Committee, Institute for Advanced Study
- 2014 – present, Program Committee, Women and Math, Institute for Advanced Study
- 2016 – 2019 Committee on Women in Mathematics at the national level, American Mathematical Society
- Oct 2016 National Summit Meeting on Women in Mathematics, Northwestern University
- 2011 – 2013, Good Practices Steering Group, Mathematical Institute, Oxford  
Overhauling department structure to qualify for national good practices award (Athena SWAN).
- 2008 – 2009 Advisory Committee, McGraw Center for Teaching and Learning, Princeton  
Member of steering committee for the support and guidance of the Princeton pedagogical center.

**SERVICE TO DUKE UNIVERSITY**

- 2014 – 2017 Faculty in Residence (living full-time in dorm with 180 freshmen) Duke University
- 2014 – 2017 Academic Advisor to pre-major students, Duke University
- 2016 – 2017 Faculty Advisory Committee, Duke Performance
- 2015 – 2017 Faculty committee for “Women in the Quantitative Sciences” initiative program, Duke
- 2014 – 2017 Steering committee for colloquium series “Natural Sciences in the 21st Century,” Duke
- Feb 2017 – Faculty speaker at ASCEND leadership program dinner
- 2016 Faculty instructor for a Duke FOCUS program (“What if?” Fall 2016) for freshmen
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Nov 2016 pre-interview of Rhodes candidate  
Sep 2016 Faculty host for Chautauqua lecture by Anita Layton, Blackwell Hall  
2016 Faculty organizer for “The Liberated Mathematician,” dinner discussion with Piper Harron  
2016 Instructor for Baldwin Scholars seminar (9 lectures, Spring 2016)  
Oct 2015 Invited speaker at Duke Colloquium dinner discussion, Blackwell Hall  
Oct 2015 Faculty host for Chautauqua lecture by Anita Layton, Blackwell Hall  
Jan 2015 Invited panel member, “Inhabiting the Frontier,” Duke University Alice M. Baldwin Scholars  
Mar 2015 Host of Professor Chat with incoming AB Duke candidates  
Mar 2015 Invited speaker at Duke Colloquium dinner discussion, Blackwell Hall  
Oct 2014 Faculty host for Chautauqua lecture by Anita Layton, Blackwell Hall

### **SERVICE TO DUKE MATH**

2017 – present, Faculty committee for Duke Mathematical Sciences Sabbatical Fellows  
2015 – 2017 Founder, WIMsical Women in Math, initiative program, Duke University  
2016 – 2017 Elliott Assistant Research Professor hiring committee  
2015 Faculty committee for SWIM Summer Workshop in Mathematics, Duke  
2015 – 2016 Quantitative Initiative hiring committee  
2014 – 2015 Elliott Assistant Research Professor hiring committee

### **SERVICE: GRANT AND FELLOWSHIP PANELS**

Rhodes Scholarship Selection Committee, District VIII USA (2006, 2007, 2008, 2014)  
National Science Foundation  
National Security Agency Mathematical Sciences Program  
ETH Zürich fellowship review  
BIRS Conference Proposals  
EPSRC  
NSERC

### **SERVICE: REFEREEING**

#### **Referee book manuscripts for publishers:**

Cambridge University Press  
Princeton University Press  
Birkhäuser/Springer

#### **Referee for journals including:**

American Journal of Mathematics  
Bulletin of the London Mathematical Society  
Compositio Mathematica  
Duke Mathematical Journal  
Functiones et Approximatio  
IMRN  
Journal of Mathematical Analysis and Applications  
Journal of Number Theory  
J. Reine Angew. Math. (Crelle)  
Math. Annalen  
Math. Proc. Cam. Phil. Soc.  
Mathematical Research Letters  
Mathematika

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Michigan Mathematical Journal  
Oxford Quarterly Journal of Mathematics  
Proceedings of the AMS  
Proceedings of the London Mathematical Society  
**Reviewer:** MathSciNet and Zentralblatt (2011–2014)

**SERVICE: MENTORING**

2013 Mathematrix, Founder and Organizer, University of Oxford  
Lunchtime discussion group on social psychology and the math community  
2006 – 2009 Mentoring Möbius, Founder and Organizer, Princeton University  
Mentoring network pairing female math undergraduates with student mentors.  
2007 – 2009 The Many Faces of Science at Princeton, Founder and Organizer  
Panel series with stellar faculty role models aiming to inspire female and minority students.  
2006 – 2009 Noetherian Ring, Princeton University, Co-organizer of networking group  
Enhancing the community of female mathematicians with mathematical, mentoring, and social events.  
2005 – 2009 Graduate Fellow, Rockefeller College, Princeton University  
Organizer and participant in discussion dinners engaging undergraduates of all disciplines.  
2006 – 2009 Major Choices Dinners, Princeton University, Organizer  
Host of a series of dinners encouraging discussion of mathematics and the math major at Princeton.  
2001 – 2002 Noetherian Ring, Princeton University, undergraduate math mentor  
2000 – 2001 Peer Instructor for Princeton University in math, general and organic chemistry

**OUTREACH: SPEAKING**

Oct 2016 GROW at Northwestern: Panel discussion on mathematical research  
Jun 2016 – present Numbers Clubs for local children (Pentagons and Heptagons)  
Jun 2016 Lunch discussion with high school girls at SWIM program, Duke  
May 2016 “Mentoring in mathematics,” Women and Math Program at the IAS  
Mar 2016 “Codes and Secrets!” at Watts Montessori Public School, Durham (grades 1–3)  
Jan 2016 “One grain of rice: exponential growth” at Watts Montessori Public School, Durham  
May 2015 “The math culture and social psychology,” Women and Math Program at the IAS  
Nov 2012 Welcome event for female graduate students, University of Oxford  
Apr 2012 Invited speaker, Rhodes Scholars Women’s Group, University of Oxford  
May 2011 Conference in Honor of Eli Stein’s 80th Birthday, Princeton, (panel discussion co-moderator)  
May 2010 Program for Women in Mathematics, Institute for Advanced Study (panel discussion)  
May 2008 Guest speaker, Princeton High School, Princeton, New Jersey  
2002 Guest lecturer, Robert Moses Algebra Project for inner-city youth, Cambridge Massachusetts.

**OUTREACH: WRITING**

2017 *Notices of the AMS* Graduate Student Section, Lillian Pierce Interview, **64** (10) (2017) 1170–1172.  
2013 – 2014, Author/editor of six interview profiles on mathematics and motherhood  
*Newsletter* of the Association for Women in Mathematics  
2013 Mathematics+Motherhood, *Fine Letters*, Princeton University Math Department newsletter  
May 2012 “Princeton Lectures in Analysis, by Elias M. Stein and Rami Shakarchi — A Book Review”  
Reviewed by Charles Fefferman and Robert Fefferman, *Notices of the AMS*, May 2012  
with contributions from Paul Hagestein, Nataša Pavlović, and Lillian Pierce  
2012 “Mentoring, collaborating, and writing books: A discussion on the inspirational role of Eli Stein”  
*Fine Letters*, Princeton University Math Department newsletter, Spring 2012  
2010 Interview for *Girls’ Angle Bulletin* (August & October 2010 issues)

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**ADDITIONAL RESEARCH EXPERIENCE**

2003 – 2008 Consultant, Center for Communications Research, La Jolla/Princeton

2003 SCAMP Summer Research, Center for Communications Research, La Jolla

2002 Graduate Mathematics Program, National Security Agency

2000 Director's Summer Program, National Security Agency

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