
CURRICULUM VITAE 2020

Lillian B. Pierce

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PROFESSIONAL APPOINTMENTS

Duke University, Professor (effective July 2020)

Duke University, Nicholas J. and Theresa M. Leonardy Associate Professor 2018 – 2020

Duke University, Associate Professor 2017 – 2018

Institute for Advanced Study, von Neumann Fellow 2017–2018

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

Research Fellow, Wolfson College, 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

Number theory and harmonic analysis

PUBLICATIONS

26. Burgess bounds for short character sums evaluated at forms II: the mixed case (arXiv:2002.03435)
25. On Bourgain's counterexample for the Schrödinger maximal function (arXiv:1912.10574)
24. Burgess bounds for short character sums evaluated at forms
with J. Xu, *Algebra and Number Theory* (to appear).
23. Reversing a philosophy: from counting to decoupling and square functions
with P. Gressman, S. Guo, J. Roos and P.-L. Yung (arXiv:1906.05877).
22. On matrix rearrangement inequalities
with R. Alaifari, X. Cheng, S. Steinerberger, *Proceedings of the AMS* (to appear).
21. On a conjecture for ℓ -torsion in class groups of number fields: from the perspective of moments
with C. Turnage-Butterbaugh and M. M. Wood (arXiv:1902.02008).
20. An effective Chebotarev density theorem for families of number fields, with an application to ℓ -torsion
in class groups
with C. Turnage-Butterbaugh and M. M. Wood, *Inventiones* (to appear)
19. A polynomial Carleson operator along the paraboloid.
with P.-L. Yung, *Revista Mat. Ibero.*, **35** (2) (2019) 339–422.
18. The Vinogradov Mean Value Theorem (after Wooley, and Bourgain, Demeter and Guth).
Séminaire Bourbaki (volume 69, 2016/2017, exposé 1134), *Astérisque*, (2019) volume 407.
17. Endpoint Sobolev and BV continuity for maximal operators
with E. Carneiro, J. Madrid, *J. Functional Analysis*, **273** (2017) 3262–3294.

16. 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).
15. On ℓ -torsion in class groups of number fields with J. Ellenberg and M. Matchett Wood, *Algebra and Number Theory*, **11** (8) Jan (2017) 1739–1778.
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

2018 – 2020 Sloan Research Fellow

2018 – 2020 Foerster-Bernstein funding to support a postdoc

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

EDITORIAL BOARDS

Journal of the AMS, Associate Editor
Transactions of the AMS
Memoirs of the AMS
Annals of Math. Studies, Princeton University Press
Experimental Mathematics

FELLOWSHIPS AND AWARDS

2019 PECASE award
2019 Joan and Joseph Birman Fellow, AMS
2018 Sloan Research Fellow
2018 Bass Society of Fellows, Duke University
2018 AWM-Sadosky Research Prize in Analysis
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)

VISITING POSITIONS

2021 (upcoming) Hausdorff Institute of Mathematics trimester (lead organizer)
2017 - 2021 Bonn Research Fellow, Hausdorff Center for Mathematics, Bonn
2017 - 2018 von Neumann Fellow, IAS
2017 (May) MSRI, Research Member, Analytic Number Theory and Harmonic Analysis Programs
2016 (August) Max Planck Institute, Bonn

DISTINGUISHED LECTURES

140. Jan 2019 AMS Invited Address, Joint Math Meetings 2019, Baltimore
139. Jun 2017 Nicolas Bourbaki seminar, Paris
138. Jan 2017 MAA Invited Address at the Joint Math Meetings 2017, Atlanta

PLENARY LECTURES

137. Sep 2020 (upcoming) Excelsior Lectures, 2020 Northeast Analysis Network Meeting
136. Apr 2019 Langford Lecture, Duke University
135. Apr 2019 Triangle Area Graduate Mathematics Conference

134. Mar 2019 Wake Forest University AWM Spring Conference
133. Mar 2019 goMATH plenary lecture, ETH
132. Jun 2016 Canadian Number Theory Association XIV, University of Calgary
131. Oct 2015 Southeastern Conference for Undergraduate Women in Mathematics, Duke University
130. Sep 2015 Heilbronn Institute for Mathematical Research, Annual Conference
129. Mar 2015 Southeast Analysis Meeting, UGA
128. Dec 2014 Palmetto Number Theory Series (PANTS XXIII) USC Columbia

COLLOQUIA

127. Jan 2020 UW Madison Colloquium
126. Feb 2019 UW Madison Colloquium
125. Feb 2019 Brown University Special Colloquium
124. Dec 2018 UT Austin Colloquium
123. Oct 2018 ETH Zürich, Special Lecture
122. May 2018 University of Maryland Colloquium
121. April 2018 Bryn Mawr Colloquium
120. Dec 2017 Rutgers Colloquium
119. May 2017 UCLA Distinguished Women in Math Colloquium
118. Mar 2017 IU Colloquium
117. Mar 2017 UW Madison Colloquium
116. Jan 2017 Brown University Colloquium
115. Dec 2016 Stony Brook University Colloquium
114. Oct 2015 UC Boulder Kempner Colloquium
113. May 2015 UT Austin Colloquium, Distinguished Women in Math series
112. Jan 2014 Berlin Mathematical School Kovalevskaya Colloquium
111. Jan 2014 University of Göttingen Colloquium
110. Jan 2013 Caltech Colloquium
109. Jan 2013 UIUC Colloquium
108. Jan 2013 UW Madison Colloquium
107. Dec 2012 UC Berkeley Colloquium
106. Nov 2012 Indiana University at Bloomington Colloquium
105. Apr 2010 Dartmouth Colloquium
104. Jan 2010 UCSB Colloquium

INVITED CONFERENCES AND PRESENTATIONS

103. Nov 2019 Oberwolfach, Analytic Number Theory
 102. Jul 2019 Analytic Number Theory, Cetraro, Italy
 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
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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. Dec 2019 Berkeley Number Theory Seminar
 76. Apr 2019 Boston University Number Theory Seminar
 75. Feb 2019 Harvard Number Theory Seminar
 74. May 2018 Princeton Number Theory Seminar
 73. Apr 2018 Princeton Analysis Seminar
 72. Mar 2018 IAS Analysis Seminar
 71. Jan 2018 IAS Members Seminar
 70. Mar 2017 U Michigan Number Theory Seminar
 69. Feb 2017 BC-MIT Number Theory Seminar
 68. Jan 2017 Emory Number Theory Seminar
 67. Jan 2017 UGA Discrete Analysis Seminar
 66. Dec 2016 Rutgers Seminar
 65. Dec 2016 Montreal Number Theory Seminar
 64. Dec 2016 Stanford Number Theory Seminar
 63. Oct 2016 UIC Number Theory Seminar
 62. Jul 2016 Max Planck Institute Number Theory Seminar, Bonn
 61. May 2016 IAS/Princeton Number Theory Seminar
 60. Jan 2016 Caltech/UCLA Analysis Seminar
 59. Jan 2016 Caltech Number Theory Seminar
 58. Oct 2015 UC Boulder Number Theory Seminar
 57. May 2015 Princeton University Analysis Seminar
 56. May 2015 UT Austin Analysis Seminar
 55. Feb 2015 UNC Chapel Hill Analysis Seminar
 54. Jan 2015 UW Madison Number Theory Seminar
 53. Feb 2014 Duke University Number Theory Seminar
 52. Dec 2013 Max Planck Institute, Bonn, Number Theory Seminar
 51. Dec 2013 University of Cologne Number Theory Seminar
 50. May 2013 Cambridge Discrete Analysis Seminar
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49. Jan 2013 UMinn Special Lecture
 48. Jan 2013 MIT Analysis Seminar
 47. Jan 2013 MIT Number Theory Seminar
 46. Jan 2013 McGill Special Lecture
 45. Dec 2012 Hausdorff Center for Mathematics, Bonn, Seminar
 44. Dec 2012 Rutgers University Seminar
 43. Dec 2012 UC Berkeley Number Theory Seminar
 42. Dec 2012 Washington University in St. Louis Seminar
 41. Nov 2012 UCSD Analysis Seminar
 40. Nov 2012 UCSD Number Theory Seminar
 39. Nov 2012 Georgia Tech Analysis Seminar
 38. Nov 2012 Warwick University Number Theory Seminar
 37. Oct 2012 Duke University Special Seminar
 36. Oct 2012 Reading University Analysis Seminar
 35. Jun 2012 University of Cologne Number Theory Seminar
 34. Jun 2011 Oxford OXPDE Analysis Seminar
 33. Apr 2011 UCLA Analysis Seminar
 32. Apr 2011 UCSD Analysis Seminar
 31. Apr 2011 Caltech Number Theory Seminar
 30. Mar 2011 University of Birmingham (England) Analysis Seminar
 29. Jan 2011 University of Bristol Analysis Seminar
 28. Dec 2010 University of Bristol Heilbronn Number Theory Seminar
 27. Dec 2010 University of Cardiff Analysis Seminar
 26. Nov 2010 UCL Pure Mathematics Seminar
 25. Apr 2010 Dartmouth Number Theory Seminar
 24. Apr 2010 MIT Number Theory Seminar
 23. Mar 2010 IAS Members Seminar, Institute for Advanced Study
 22. Oct 2009 IAS Short Talks by New Members, Institute for Advanced Study
 21. Nov 2008 Brown University Analysis Seminar
 20. Jun 2008 Oxford University Number Theory Seminar
 19. May 2008 University of Wisconsin at Madison, Analysis Seminar
 18. Apr 2008 Stony Brook University Analysis Seminar
 17. Jan 2007 University of Bordeaux Number Theory Seminar
 16. Apr 2006 Brown University Number Theory Seminar
 15. Mar 2006 Ohio State University Number Theory Seminar
 14. Jun 2005 Columbia University Number Theory Seminar
 13. Apr 2005 UCLA Number Theory Seminar
 12. Mar 2005 Caltech Number Theory Seminar
 11. Mar 2005 University of Indiana at Bloomington Algebra Seminar
 10. Mar 2005 University of Wisconsin at Madison Algebra and Number Theory Seminar
 9. Feb 2005 Princeton University Seminar Course in Analysis
 8. Dec 2004 Courant Institute Number Theory Seminar
 7. Nov 2004 Royal Holloway College Pure Mathematics Seminar
 6. Nov 2004 University of Michigan Number Theory Seminar
 5. Jun 2004 Oxford University Number Theory Seminar
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MINICOURSES

4. Jul 2019 Character sums, HCM Bonn
3. Jan 2019 Trace Functions and their Applications, ETH Zürich in Monte Verità
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

9. May 2019 National Math Festival featured speaker, Washington DC
8. Feb 2018 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

PARTICIPATORY INVITED WORKSHOPS

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

OTHER PUBLICATIONS

5. “On torsion subgroups in class groups of number fields,” JMM 2019 Lecture Sampler, *Notices of the AMS*, **66** no. 1, January 2019.
4. “On ℓ -torsion in class groups of number fields of arbitrary degree,” L. B. Pierce (joint work with C. Turnage-Butterbaugh and M.M. Wood) Oberwolfach Report No. 53/2016 DOI 10.4171/OWR/2016/53 (2016) 3017.
3. “Novel bounds for exponential sums arising in number theory,” L. B. Pierce (joint work with D.R. Heath-Brown) Oberwolfach Report No. 34/2014 DOI 10.4171/OWR/2014/34 (2014) 1902–1904.
2. “Burgess bounds for short mixed character sums,” L. B. Pierce (joint work with D.R. Heath-Brown) Oberwolfach Report No. 51/2013 DOI 10.4171/OWR/2013/51 (2013) 3013–3014.
1. “Princeton Lectures in Analysis, by Elias M. Stein and Rami Shakarchi — A Book Review” Reviewed by Charles Fefferman and Robert Fefferman, with contributions from Paul Hagelstein, Nataša Pavlović, and Lillian Pierce *Notices of the AMS*, May 2012.

POSTDOCTORAL RESEARCH ADVISING

2021– 2022 (upcoming) Duke University: Postdoctoral mentor to D. Maldague
2018 – 2019 Duke University: Postdoctoral mentor to Dr. J. Wang, Foerster-Bernstein Fellow
2015 – 2018 Duke University: Postdoctoral mentor to Dr. C. Turnage-Butterbaugh
(Asst. Prof. Carleton College)
2013 – 2015 University of Bonn: Postdoctoral mentor to Dr. D. Schindler
(Member at IAS, Asst. Prof. Utrecht, Assoc. Prof. Göttingen)

GRADUATE RESEARCH ADVISING

2017– present: Chen An (4th year grad student, Duke University)

UNDERGRADUATE RESEARCH ADVISING

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

CONFERENCE FUNDING

2016 & 2017 NSA Conference Grants (c. 27,000 USD, PI)

2015 AIM Workshop funding (“Carleson Theorems and Multilinear Operators”)

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

ORGANIZATION: TRIMESTER

May–Aug 2021 HIM Trimester (Bonn): Harmonic Analysis and Analytic Number Theory

ORGANIZATION: CONFERENCES

2021 (upcoming) Arithmetic Applications of Fourier Analysis, Bonn HIM

2021 (upcoming) Harmonic Analysis from the Edge, Bonn HIM

2020 Co-organizer of “A room of one’s own”

2020 Co-organizer of SouthEastern Regional Meeting on Numbers, Duke University (postponed)

2019 Co-organizer of special session “Counting methods in number theory,” JMM 2019

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

2017 Co-organizer of Connections for Women (Analytic Number Theory), MSRI

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

2015 Co-organizer of AIM Workshop: Carleson Theorems and Multilinear Operators

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

2014 Co-organizer of ENFANT workshop, Hausdorff Center for Mathematics, Bonn

Two day workshop with short talks by 42 early-career researchers.

2012 Founder and organizer of Oxford Number Theory Day (research retreat), Oxford University

ORGANIZATION: SEMINARS AND SUMMER SCHOOLS

2021 (upcoming) Bonn Hausdorff Summer School: Polynomial Methods

2020 (upcoming) Bonn Hausdorff Summer School: The Circle Method, entering its second century

2018 Bonn Hausdorff Summer School on L -functions

2018 AMS-MRC summer school in analysis,

Harmonic Analysis: New Developments in Oscillatory Integrals

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

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

PhD THESIS COMMITTEES

2020 Huong (Thomas) Tran, student of Jacye Getz, Duke University
2018 K. McKeon, student of A. Kontorovich, Rutgers University
2016 D. Milovic, student of E. Fouvry and P. Stevenhagen, Orsay and Leiden
2014 R. Alaifari, student of I. Daubechies and M. Defrise, Vrije Universiteit Brussel

PhD ORAL QUALIFYING EXAM COMMITTEES

2020 Chun-Hsien Hsu, Oral Preliminary Exam, Duke University
2016 Zhe Wang, Oral Preliminary Exam, Duke University
2016 Kevin Stubbs, Oral Preliminary Exam, Duke University
2016 Huong (Thomas) Tran, Oral Preliminary Exam, Duke University

PhD PRELIM EXAM COMMITTEES

2019 Chen An, Duke University

TEACHING RECOGNITION AND LEADERSHIP

2020 Director of Focus program “What If?”
2018 Bass Society of Fellows, Duke University (excellence in research and undergraduate teaching)
2009 Princeton University Award (APGA) for Teaching by a Graduate Student

SERVICE: TO DUKE UNIVERSITY (selected)

2019 – present, co-convener, Senior Women in Science, 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
2016 Faculty instructor for a Duke FOCUS program (“What if?” Fall 2016) for freshmen
2014 – present Faculty host and guest speaker for many student events

SERVICE: NATIONAL AND INSTITUTE COMMITTEES

2020 – present, Number Theory Foundation
2018 – present, Current Events Bulletin Committee (associated to MSRI)
2019 – 2021 AMS Southeastern Section Program Committee
2018 – present, Diversity Committee, Institute for Advanced Study
2014 – present, Program Committee, Women and Math, Institute for Advanced Study
2016 – 2019 AMS Committee on Women in Mathematics
2016 National Summit Meeting on Women in Mathematics, Northwestern University
2011 – 2013, Good Practices Steering Group, Mathematical Institute, Oxford (Athena SWAN)

SERVICE: GRANT AND FELLOWSHIP PANELS

Rhodes Scholarship Selection Committee
Schmidt Science Fellows
Karen EDGE Fellowship Program
National Science Foundation
National Security Agency Mathematical Sciences Program
ETH Zürich fellowship review (Switzerland)
BIRS Conference Proposals (Canada)
EPSRC (EU)
NSERC (Canada)
DFG (Germany)
U.S.-Israel Binational Science Foundation

SERVICE: REFEREEING**Referee book manuscripts for publishers:**

Cambridge University Press
Princeton University Press
Birkhäuser/Springer

Referee for journals including:

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

Reviewer: MathSciNet and Zentralblatt (2011–2014)

SERVICE: MENTORING

2019 – present Faculty advisor, local AWM student chapter, Duke University
2015 – 2017 Founder, WIMsical Women in Math, initiative program, Duke University
2013 Mathematrix, Founder and Organizer, University of Oxford
2006 – 2009 Mentoring Möbius, Founder and Organizer, Princeton University
2007 – 2009 The Many Faces of Science at Princeton, Founder and Organizer
2006 – 2009 Noetherian Ring, Princeton University, Co-organizer of networking group
2005 – 2009 Graduate Fellow, Rockefeller College, Princeton University
2006 – 2009 Major Choices Dinners, Princeton University, Organizer
2001 – 2002 Noetherian Ring, Princeton University, undergraduate math mentor
2000 – 2001 Peer Instructor for Princeton University in math, general and organic chemistry

OUTREACH: SPEAKING

Dec 2019 “Math and music,” 5th grade enrichment in Chapel Hill public school
Oct 2016 GROW at Northwestern: Panel discussion on mathematical research
2016 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.
Mathematics + Motherhood interviews in *Newsletter* of the Association for Women in Mathematics
2013 Mathematics+Motherhood, *Fine Letters*, Princeton University Math Department newsletter
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)

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
