

## Brett D. Wick

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### Education:

Brown University  
Ph.D. in Mathematics, June 2005  
Sc.M. in Mathematics, May 2003

University of Houston  
B.S. in Mathematics, May 2001  
Minor in Physics, May 2001

### Professional Experience:

Professor of Mathematics, Washington University - St. Louis, Summer 2017 – Present.

Director of Graduate Studies, Washington University - St. Louis, Summer 2017 – Present.

Associate Professor of Mathematics, Washington University - St. Louis, Fall 2015 – Summer 2017.

Director of Postdoctoral Teaching Effectiveness, School of Mathematics, Georgia Institute of Technology, Fall 2013 – Summer 2015.

Associate Professor of Mathematics, Georgia Institute of Technology, Fall 2012 – Summer 2016.

Assistant Professor of Mathematics, Georgia Institute of Technology, Fall 2009 – Summer 2012.

Palmetto Assistant Professor of Mathematics, University of South Carolina, Fall 2007 – Summer 2009.

Assistant Professor of Mathematics, Vanderbilt University, Fall 2005 – Summer 2007.

### Visiting Positions:

Poste Rouge, Université Orleans and Université de Nantes, Spring 2017 (3 months).

Poste Rouge, Université Bordeaux, Summer 2015 (1 month).

Oberwolfach Simons Visiting Professor, Universität des Saarlandes, Summer 2014 (1 week).

Professeur Invité, Université Paul Sabatier – Toulouse, Summer 2013 (1 month).

Bucknell Distinguished Visiting Professor, Fall 2009, Fall 2010, Spring 2014 (1 week).

Professeur Invité, Université Paul Verlaine – Metz, Summer 2009 (1 month).

## Teaching Experience:

### Washington University - St. Louis:

Graduate Real Analysis, Fall 2016.  
Graduate Harmonic Analysis, Fall 2017, Fall 2016.  
Calculus I, Spring 2018, Fall 2015 (Two Sections).

### Georgia Institute of Technology:

Calculus III, Fall 2009, Fall 2013, Fall 2014.  
Foundations of Mathematical Proofs, Spring 2014.  
Undergraduate Real Analysis II, Spring 2013.  
Undergraduate Real Analysis I, Fall 2012.  
Graduate Real Analysis II, Spring 2012.  
Graduate Real Analysis I, Fall 2011.  
Graduate Complex Analysis, Spring 2011.  
Analytic Function Theory, Fall 2010.  
Calculus III for Computer Scientists, Fall 2009.

## Research:

### Research Interests:

Harmonic Analysis      Several Complex Variables  
Function Theory      Operator Theory

### Awards and Honors:

### Research Recognitions:

Fellow of the American Mathematical Society.  
NSF CAREER Award, Fall 2010 – Spring 2015.  
Alexander von Humboldt Research Fellow, Spring 2010 – Spring 2012.  
American Mathematical Society Ky Fan Fund Exchange Fellow, Summer 2013.  
Jerrold E. Marsden Postdoctoral Fellow, Fields Institute, Spring 2008.  
Wallenberg Postdoctoral Fellow, Swedish Royal Institute of Technology, Fall 2007.  
Young Investigator: Workshop in Analysis and Probability, Texas A&M University, Summer 2006.

**Mentoring and Teaching Recognitions:**

- Georgia Tech Hesburgh Award Teaching Fellow, Fall 2015; declined.
- Georgia Tech College of Sciences 2014 Faculty Mentor Award.
- Georgia Tech Class of 1969 Teaching Scholar, Fall 2012.

**Grants Awarded:**

1. National Science Foundation – DMS # **1603246** “CAREER: An Integrated Proposal Based on the Corona Problem”, 08/01/10 – 07/31/16, \$36,570.
2. National Science Foundation – DMS # **1560955** “Applications of Harmonic Analysis to Function Theory and Operator Theory”, 08/17/15 – 7/31/2018, \$180,001.
3. National Science Foundation – DMS # **1500509** “Applications of Harmonic Analysis to Function Theory and Operator Theory”, 07/01/15 – 7/31/2018, \$180,001.
4. National Science Foundation – DMS # **1344199** “MCTP: A Postdoctoral Program for Interdisciplinary Mathematics Preparation And Career Training (IMPACT) in the School of Mathematics at the Georgia Institute of Technology”, 09/15/14 – 8/31/2019, \$1,299,994 (Co-Principal Investigator).
5. National Science Foundation – DMS # **1241272** “NSF/CBMS Regional Conference in the Mathematical Sciences: Uncertainty Principles in Harmonic Analysis: Gap and Type Problems”, 09/15/12 – 8/31/2013, \$35,050 (Co-Principal Investigator).
6. National Science Foundation – DMS # **1200994** “The Corona Problem: Connections Between Operator Theory, Function Theory and Geometry”, 11/01/11 – 10/31/2012, \$18,000.
7. National Science Foundation – DMS # **1001098** “Function Theory and Operator Theory via Harmonic Analysis on the Polydisc”, 06/01/10 – 05/31/13, \$53,003.
8. National Science Foundation – DMS # **0955432** “CAREER: An Integrated Proposal Based on the Corona Problem”, 08/01/10 – 07/31/15, \$449,439.
9. National Science Foundation – DMS # **0969431** “SEAM XXVI Georgia Institute of Technology Spring 2010”, 01/01/10 – 12/31/10, \$24,300.
10. National Science Foundation – DMS # **0752703** “Investigations on the Corona Problem and a Study of Multi-Parameter Harmonic Analysis”, 08/16/07 – 07/31/09, \$58,907.
11. National Science Foundation – DMS # **0555896** “Investigations on the Corona Problem and a Study of Multi-Parameter Harmonic Analysis”, 08/16/06 – 07/31/09, \$80,867.

**Publications:**

**Preprints:**

1. Michael Lacey and Brett D. Wick, Two Weight Inequalities for Riesz Transforms: Uniformly Full Dimension Weights.

2. Zhangjian Hu, Xiaofen Lv, and Brett D. Wick, Weakly Localized Operators on Fock Spaces with Application to Compactness.
3. Roc Oliver Vendrell and Brett D. Wick, Weak factorization of Hardy spaces in the Bessel setting.
4. Mishko Mitkovski and Brett D. Wick, On the Uniqueness Sets in the Fock Space.

**Submitted:**

1. Xuan Thinh Duong, Irina Holmes, Ji Li, Brett D. Wick and Dongyong Yang, Two Weight Commutators in the Dirichlet and Neumann Laplacian Settings, submitted to Proc. London Math. Soc. (08-28-17).
2. The Anh Bui, Xuan Thinh Duong, Ji Li, and Brett D. Wick, Boundedness for functional calculus of Schrödinger operators on non-doubling manifold with ends, submitted to Trans. Amer. Math. Soc. (08-25-2017).
3. Xuan Thinh Duong, Ji Li, and Brett D. Wick, Two weight commutators for Beurling-Ahlfors operator, submitted to Proc. Amer. Math. Soc. (07-29-17).
4. Ji Li and Brett D. Wick, The Two-Weight Inequality for the Poisson Operator in the Bessel Setting, submitted to Math. Res. Lett. (07-24-17).
5. Irina Holmes, Stefanie Petermichl, and Brett D. Wick, Weighted little bmo and two-weight inequalities for Journé commutators, submitted to Anal. PDE (06-14-17).
6. Xuan Thinh Duong, Ji Li, Yumeng Ou, Brett D. Wick, and Dongyong Yang, Product BMO, little BMO and Riesz commutators in the Bessel setting, submitted to J. Geo. Anal. (06-03-2017).
7. Robert Rahm, Ji Li, and Brett D. Wick,  $A_p$  Weights and Quantitative Estimates in the Schrödinger Setting, submitted to Math. Z. (05-17-17).
8. Kelly Bickel, Amalia Culiuc, Sergei Treil and Brett D. Wick, Two Weight Estimates with Matrix Measures for Well Localized Operators, submitted to Trans. Amer. Math. Soc. (01-06-17).
9. Xuan Thinh Duong, Ji Li, Brett D. Wick and Dongyong Yang, Characterizations of Product Hardy Spaces in the Bessel Setting, submitted to Adv. Math. (12-16-16).
10. Yongsheng Han, Ming-Yi Lee, Ji Li and Brett D. Wick, Characterizations of flag Hardy space via Riesz transforms, maximal functions and Littlewood-Paley theory, submitted to Adv. Math. (11-12-16).
11. Michael Lacey, Eric Sawyer, Chun-Yen Shen, Ignacio Uriarte-Tuero, and Brett D. Wick, Two Weight Inequalities for the Cauchy Transform from  $\mathbb{R}$  to  $\mathbb{C}_+$ , submitted to Anal. PDE (09-11-15).

**Accepted or Published:**

1. Irina Holmes and Brett D. Wick, Two Weight Inequalities for Iterated Commutators with Calderón-Zygmund Operators, *J. Operator Theory* *to appear*.
2. Xuan Thinh Duong, Ji Li, Brett D. Wick and Dongyong Yang, A Constructive Proof of Weak Factorization for the Predual of Little BMO Spaces, *Ann. Inst. Fourier* *to appear*.
3. Ji Li and Brett D. Wick, Weak Factorizations of the Hardy space  $H^1(\mathbb{R}^n)$  in terms of Multilinear Riesz Transforms, *Canad. Math. Bull.* **60** (2017), no. 3, 571–585.
4. Jorge J. Betancor, Xuan Thinh Duong, Ji Li, Brett D. Wick, and Dongyong Yang, Product Hardy, BMO spaces and iterated commutators associated with Bessel Schrödinger operators, *Indiana Univ. Math. J.* *to appear*.
5. Ji Li and Brett D. Wick, Characterizations of  $H^1_{\Delta_N}(\mathbb{R}^n)$  and  $BMO_{\Delta_N}(\mathbb{R}^n)$  via Weak Factorizations and Commutators, *J. Funct. Anal.*, **272** (2017), no. 12, 5384–5416.
6. José A. Peláez, Jouni Rättyä, and Brett D. Wick, Bergman projection induced by kernels with integral representation, *J. Anal. Math.* *to appear*.
7. Philippe Jaming, Elodie Pozzi, and Brett D. Wick, Lower Bounds for the Dyadic Hilbert Transform, *Ann. Fac. Sci. Toulouse Math.* *to appear*.
8. Robert Rahm, Edgar Tchoundja and Brett D. Wick, Weighted Estimates for the Berezin Transform and Bergman Projection on the Unit Ball in  $\mathbb{C}^n$ , *Math. Z.* **286** (2017), no. 3-4, 1465–1478.
9. Eric Sawyer and Brett D. Wick, The Corona Problem for Kernel Multiplier Algebras, *Integral Equations Operator Theory*, **86** (2016), no. 4, 495-544.
10. Sandra Pott, Maria Carmen Reguera, Eric Sawyer, and Brett D. Wick, Composition of Dyadic Paraproducts, *Adv. Math.* **298** (2016) 581–611.
11. Sandra Pott, Eric Sawyer, Maria Carmen Reguera, and Brett D. Wick, The Linear Bound for the Natural Weighted Resolution of the Haar Shift, *Conference Proceedings of AMSI/AustMS 2014 Workshop in Harmonic Analysis and its Applications*, *to appear*.
12. Stefan Richter and Brett D. Wick, A Remark on the Multipliers on Spaces of Weak Products of Functions, *Concr. Oper.*, **3** (2016), 25–28.
13. Xuan Thinh Duong, Ji Li, Brett D. Wick, and Dongyong Yang, Hardy space via factorization, BMO space via Commutators in the Bessel Setting, *Indiana Univ. Math. J.*, **66** (2017) 1081–1106.
14. Irina Holmes, Michael T. Lacey, and Brett D. Wick, Commutators in the Two-Weight Setting, *Math. Ann.* **367** (2017), no. 1-2, 51-80.
15. Kelly Bickel, Stefanie Petermichl, and Brett D. Wick, Bounds for the Hilbert Transform with Matrix  $A_2$  Weights, *J. Funct. Anal.* **270** (2016), no. 5, 1719–1743.
16. Irina Holmes, Michael T. Lacey, and Brett D. Wick, Bloom’s Inequality: Commutators in a Two-Weight Setting, *Arch. Math. (Basel)*, **106** (2016) no. 1, 53–63.

17. Pamela Gorkin and Brett D. Wick, Thin Sequences, Conference Proceedings of Mittag-Leffler, Contemp. Math. **679** Amer. Math. Soc., Providence, RI, 2016, 129–145.
18. Kelly Bickel and Brett D. Wick, Well-Localized Operators on Matrix Weighted  $L^2$  Spaces, Houston J. Math., **42** (2016) no. 1, 249–284.
19. Pamela Gorkin and Brett D. Wick, Thin Sequences and Their Role in Model Spaces and Douglas Algebras, J. Fourier Anal. Appl., **22** (2016) no. 1, 137–158.
20. Kelly Bickel and Brett D. Wick, A Study of the Matrix Carleson Embedding Theorem with Applications to Sparse Operators, J. Math. Anal. Appl., **435** (2016), no. 1, 229–243.
21. Robert Rahm and Brett D. Wick, The Essential Norm of Operators on the Bergman Space of Vector-Valued Functions on the Unit Ball, *Function Spaces in Analysis*, Contemp. Math. **645**, Amer. Math. Soc., Providence, RI, 2015, 249–281.
22. Josh Isralowitz, Mishko Mitkovski, and Brett D. Wick, Localization and Compactness in Bergman and Fock Spaces, Indiana Univ. Math. J. **64** (2015), no. 5, 1553–1573.
23. Mishko Mitkovski and Brett D. Wick, A Reproducing Kernel Thesis for Operators on Bergman-type Function Spaces, J. Funct. Anal. **267** (2014), no. 7, 2028–2055.
24. Pamela Gorkin, Sandra Pott, John McCarthy, and Brett D. Wick, Thin Sequences and the Gram matrix, Arch. Math. (Basel) **103** (2014), no. 1, 93–99.
25. Kelly Bickel, Eric Sawyer, and Brett D. Wick, The Linear Bound for Haar Multiplier Paraproducts, *Conference Proceedings for Invariant Subspaces of the Shift Operator*, Contemp. Math. **638**, Amer. Math. Soc., Providence, RI, 2015, 267–286.
26. Ron Douglas, Steve Krantz, Eric Sawyer, Sergei Treil, and Brett D. Wick, A History of the Corona Problem, *The Corona Problem: Connections Between Operator Theory, Function Theory and Geometry*, Fields Inst. Commun. **72**, Springer 2014, 1–30.
27. Sergei Treil and Brett D. Wick, Corona Solutions Depending Smoothly on Corona Data, *The Corona Problem: Connections Between Operator Theory, Function Theory and Geometry*, Fields Inst. Commun. **72**, Springer 2014, 201–210.
28. Pamela Gorkin, Sandra Pott, and Brett D. Wick, Thin Sequences and Their Role in  $H^p$  Theory, Model Spaces, and Uniform Algebras, Rev. Mat. Iberoam., **31** (2015), no. 3, 841–864.
29. Nicola Arcozzi, Richard Rochberg, Eric Sawyer, and Brett D. Wick, Potential theory on trees, graphs, and Ahlfors regular metric spaces, Potential Anal. **41** (2014), no. 2, 317–366.
30. Mishko Mitkovski and Brett D. Wick, The Essential Norm of Operators on  $A^p(\mathbb{D}^n)$ , *The Varied Landscape of Operator Theory*, Theta Foundation, Bucharest, Romania 2014, 165–211.
31. Dmitriy Bilyk, Laura De Carli, Alexander Petukhov, Alexander Stokolos, and Brett D. Wick, On the scientific work of Konstantin Ilyich Oskolkov, *Recent Advances in Harmonic Analysis and Applications*, Springer Proc. Math. Stat. **75**, (2013) 3–21.
32. Amol Sasane, Jaydeb Sarkar, and Brett D. Wick, Doubly Commuting Submodules of the Hardy Module over Polydiscs, Studia Math. **217** (2013), no. 2, 179–192.

33. Alexander Volberg and Brett D. Wick, Bergman-type Singular Integral Operators on Metric Spaces, *Recent Trends in Analysis: Proceedings of the Conference in honor of Nikolai Nikolski*, Theta Foundation, Bucharest, Romania 2013, 221–243.
34. Mrinal Ragupathi and Brett D. Wick, Some Remarks about Interpolating Sequences in Reproducing Kernel Hilbert Spaces, *Houston J. Math.*, **41** (2015), no. 1, 213–230.
35. Mishko Mitkovski, Daniel Suárez, and Brett D. Wick, The Essential Norm of Operators on  $A_\alpha^p(\mathbb{B}_n)$ , *Integral Equations Operator Theory* **75** (2013), no. 2, 197–233.
36. Michael Lacey, Stefanie Petermichl, Jill Pipher, and Brett D. Wick, Multi-Parameter Div-Curl Lemmas, *Bulletin London Math. Soc.* **44**, (2012) no. 6, 1123–1131.
37. Brett D. Wick, Corrigenda: “Stabilization in  $H_\mathbb{R}^\infty(\mathbb{D})$ ”, *Publ. Mat.* **55** (2011), no. 1, 251–260.
38. Nicola Arcozzi, Richard Rochberg, Eric Sawyer, and Brett D. Wick, The Dirichlet Space: A Survey, *Proceedings of Recent Advances in Function Theoretic Operator Theory*, New York J. Math. **17a** (2011), 45–86.
39. Nicola Arcozzi, Richard Rochberg, Eric Sawyer, and Brett D. Wick, Distance Functions for Reproducing Kernel Hilbert Spaces, *Proceedings of the Sixth Conference on Function Spaces*, *Contemp. Math.* **547**, Amer. Math. Soc., Providence, RI, 2011, 25–53.
40. Șerban Costea, Eric Sawyer, and Brett D. Wick, The Corona Theorem for the Drury-Arveson Hardy space and other holomorphic Besov-Sobolev spaces on the unit ball in  $\mathbb{C}^n$ , *Anal. PDE* **4** (2011), no. 4, 499–550.
41. Nicola Arcozzi, Richard Rochberg, Eric Sawyer, and Brett D. Wick, Function Spaces Related to the Dirichlet Space, *J. London Math. Soc.* (2) **83** (2011), no. 1, 1–18.
42. Alexander Volberg and Brett D. Wick, Bergman-type Singular Operators and the Characterization of Carleson Measures for Besov–Sobolev Spaces on the Complex Ball, *Amer. J. Math.* **134** (2012), no. 4, 949–992.
43. Raymond Mortini, Amol Sasane, Rudolph Rupp, and Brett D. Wick, Topological Stable Rank of  $H^\infty(\Omega)$  for Circular Domains  $\Omega$ , *Anal. Math.* **36** (2010) no. 4, 287–297.
44. Mrinal Ragupathi and Brett D. Wick, Duality, Tangential Interpolation, and Töplitz Corona Problems, *Integral Equations Operator Theory* **68** (2010), no. 3, 337–355.
45. Șerban Costea, Eric Sawyer, and Brett D. Wick, BMO Estimates for the  $H^\infty(\mathbb{B}_n)$  Corona Problem, *J. Funct. Anal.* **258** (2010), no. 11, 3818–3840.
46. Nicola Arcozzi, Richard Rochberg, Eric Sawyer, and Brett D. Wick, Bilinear Forms on the Dirichlet Space, *Anal. PDE* **3** (2010), no. 1, 21–47.
47. Raymond Mortini and Brett D. Wick, Spectral Characteristics and Stable Ranks for the Sarason Algebra  $H^\infty + C$ , *Michigan Math. J.* **59** (2010), no. 2, 395–409.
48. Michael Lacey, Stefanie Petermichl, Jill Pipher, and Brett D. Wick, Iterated Riesz Commutators: A Simple Proof of Boundedness, *Harmonic Analysis and Partial Differential Equations*, *Contemp. Math.* **505**, Amer. Math. Soc., Providence, RI, 2010, 171–178.

49. Stefanie Petermichl, Leonid Slavin, and Brett D. Wick, New Estimates for the Beurling-Ahlfors Operator on Differential Forms, *J. Operator Theory* **65** (2011), no. 2, 307–324.
50. Dmitriy Bilyk, Michael Lacey, Xiaochun Li, and Brett D. Wick, Composition of Haar Paraproducts: The Random Case, *Anal. Math.* **35** (2009), no. 1, 1–13.
51. Raymond Mortini and Brett D. Wick, Simultaneous Stabilization in  $A_{\mathbb{R}}(\mathbb{D})$ , *Studia Math.* **191** (2009), no. 3, 223–235.
52. Brett D. Wick, Stabilization in  $H_{\mathbb{R}}^{\infty}(\mathbb{D})$ , *Publ. Mat.* **54** (2010), no. 1, 25–52.
53. Tavan Trent and Brett D. Wick, Toeplitz Corona Theorems for the Polydisk and the Unit Ball, *Complex Anal. Oper. Theory* **3** (2009), no. 3, 729–738.
54. Raymond Mortini and Brett D. Wick, The Bass and Topological Stable Ranks of  $H_{\mathbb{R}}^{\infty}(\mathbb{D})$  and  $A_{\mathbb{R}}(\mathbb{D})$ , *J. Reine Angew. Math.* **636** (2009), 175–191.
55. Michael Lacey, Stefanie Petermichl, Jill Pipher, and Brett D. Wick, Multi-Parameter Riesz Commutators, *Amer. J. Math.* **131** (2009), no. 3, 731–769.
56. Raymond Mortini, Amol Sasane, and Brett D. Wick, The Corona Theorem and Stable Rank for  $\mathbb{C} + BH^{\infty}$ , *Houston J. Math.* **36** (2010), no. 1, 289–302.
57. Sergei Treil and Brett D. Wick, Analytic Projections, Corona Problem and Geometry of Holomorphic Vector Bundles, *J. Amer. Math. Soc.* **22** (2009), no. 1, 55–76.
58. Stefanie Petermichl, Sergei Treil, and Brett D. Wick, Carleson Potentials and the Reproducing Kernel Thesis for Embedding Theorems, *Illinois J. of Math.* **51** (2007), no. 4, 1249–1263.
59. Stefanie Petermichl and Brett D. Wick, A Weighted Estimate for the Square Function on the Unit Ball of  $\mathbb{C}^n$ , *Ark. Mat.* **45** (2007), no. 2, 337–350.
60. Brett D. Wick, A Note About Stabilization in  $A_{\mathbb{R}}(\mathbb{D})$ , *Math. Nachr.* **282** (2009), no. 6, 912–916.
61. Michael Lacey, Erin Terwilleger, and Brett D. Wick, Remarks on Product VMO, *Proc. Amer. Math. Soc.* **134** (2006), no. 2, 465–474.
62. Sergei Treil and Brett D. Wick, The Matrix-Valued  $H^p$  Corona Problem for the Disk and Polydisk, *J. Funct. Anal.* **226** (2005), no. 1, 138–172.

#### Books Edited:

1. Ron Douglas, Steve Krantz, Eric Sawyer, Sergei Treil, and Brett D. Wick, *The Corona Problem: Connections Between Operator Theory, Function Theory and Geometry*, Fields Inst. Commun. **74** (2014).
2. Dmitriy Bilyk, Laura DeCarli, Alexander Petukhov, Alexander Stokolos, and Brett D. Wick, *Recent Advances in Harmonic Analysis and Applications: In Honor of Konstantin Oskolkov*, Springer Proc. Math. Stat. **75** (2013).

## Talks, Conferences, and Workshops:

### Talks:

#### Colloquium Talks:

- Macquarie University, Summer 2016.
- University of Hawaii, Spring 2016.
- Baylor University, Spring 2013, Fall 2015.
- Washington University, St. Louis, Spring 2012, Fall 2014.
- Universität des Saarlandes, Spring 2014.
- Bucknell University (2 talks), Fall 2009, Fall 2010, Spring 2014.
- University of Waterloo, Spring 2014.
- University at Albany, State University of New York, Fall 2013.
- University of Alabama - Birmingham, Spring 2013.
- University of Wisconsin - Milwaukee, Fall 2012.
- University of Rochester, Fall 2012.
- Fields Institute 20th Anniversary “Back to Fields Colloquium”, Summer 2012.
- United States Naval Academy, Spring 2012.
- Trinity University, Spring 2012.
- University of Cincinnati, Spring 2012.
- University of Alabama, Fall 2011.
- University of Houston, Spring 2009.
- Texas A&M University, Spring 2007, Spring 2009.
- University of South Florida, Spring 2009.
- Georgia Institute of Technology, Spring 2009.
- University of Tennessee – Knoxville, Spring 2007.
- University of South Carolina, Spring 2007.
- University of Alabama – Tuscaloosa, Spring 2007.

**Seminar Talks:**

Université d'Orsay – Paris Sud, Spring 2009, Spring 2017.

Université Pierre-et-Marie-Curie – University of Paris 6, Spring 2009, Spring 2017.

Université de Nantes, Analysis Seminar, Spring 2017.

Université de Bordeaux, Analysis Seminar, Summer 2015, Fall 2015, Fall 2016.

Leibniz Universität, Hanover, Spring 2010, Spring 2014, Summer 2016.

University of Hawaii Analysis Seminar, Spring 2016.

Universitat de Barcelona, Departamento de Análisis Matemático, Spring 2016.

Georgia Institute of Technology Analysis Seminar, Fall 2004, Fall 2005, Fall 2006, Fall 2008, Spring 2010, Spring 2012, Spring 2016.

Washington University - St. Louis Graduate Seminar, Fall 2015.

Clemson University Analysis Seminar, Spring 2013, Spring 2015.

Johns Hopkins University Analysis Seminar, Fall 2014.

Brown University Analysis Seminar, Spring 2004, Fall 2004, Spring 2005, Fall 2008, Fall 2011, Fall 2012, Fall 2014.

Southwestern University of Finance and Economics, School of Economic Mathematics, Summer 2014.

Georgia Institute of Technology Research Horizons Seminar, Fall 2009, Spring 2011, Fall 2012, Spring 2014.

Instituto Argentino de Matemática, University of Buenos Aires, Fall 2013.

Fudan University Analysis Seminar, Summer 2013.

Beijing Normal University Analysis Seminar, Summer 2013.

University of Cincinnati, Spring 2012.

Georgia Institute of Technology Undergraduate Seminar, Fall 2010, Fall 2011.

Washington University - St. Louis Analysis Seminar, Fall 2011.

Kansas State University Analysis Seminar, Fall 2011.

Kennesaw State University Analysis Seminar, Fall 2010.

Norwegian University of Science and Technology, Department of Mathematical Sciences, Trondheim, Norway, Spring 2010.

Universidad de Sevilla, Departamento de Análisis Matemático, Spring 2010.

Université Paul Sabatier, Institut de Mathématiques de Toulouse, Spring 2010.

University of Edinburgh, Spring 2010.

Universität Paderborn, Spring 2010.

Università di Trento, Spring 2009.

Université d'Orléans, Spring 2009.

University of South Carolina, Fall 2008, Spring 2009.

Université Paul Verlaine – Metz, Department of Mathematics Analysis Seminar, Fall 2007, Spring 2009.

Michigan State University, Department of Mathematics Analysis Seminar, Spring 2008, Fall 2008, Spring 2009.

University of Missouri Analysis Seminar, Fall 2008.

University of Houston Analysis Seminar, Fall 2006, Fall 2008.

Texas A&M University Analysis Seminar, Fall 2008.

Cornell University Analysis Seminar, Fall 2005, Spring 2008.

Fields Institute Harmonic Analysis Seminar, Spring 2008.

University of Jyväskylä, Department of Mathematics Analysis Seminar, Fall 2007.

University of Helsinki, Department of Mathematics Analysis Seminar, Fall 2007.

London School of Economics, Department of Mathematics CDAM Seminar, Fall 2007.

The Royal Institute of Technology (KTH), Department of Mathematics Analysis Seminar, Fall 2007.

Vanderbilt University, Fall 2005, Spring 2007.

University of Tennessee – Knoxville Analysis Seminar, Fall 2005.

### **Conference and Workshop Talks:**

Plenary Speaker, Southeastern Analysis Meeting (SEAM) XXXIV, Georgia Institute of Technology, March 23-25 2018, upcoming.

Plenary Speaker, Finnish Mathematical Days, University of Eastern Finland, Joensuu, Finland, January 4-5, 2018, upcoming.

Plenary Speaker, Journées de GDR d'Analyse, University of Bordeaux, Bordeaux, France, October 9-11, 2017, upcoming.

Plenary Speaker, The AMSI/AustMS 2017 Workshop in Harmonic Analysis and its Applications, Macquarie University, Sydney, Australia, July 17-21, 2017.

Plenary Speaker, XIV Advanced Course in Operator Theory and Complex Analysis, Instituto de Ciencias Matemáticas, Madrid, Spain, June 19-22, 2017.

Recent Trends in Harmonic and Complex Analysis, University of Orléans, Orléans, France, April 3-5, 2017.

Harmonic Analysis/PDEs Workshop, University of Birmingham, Birmingham, United Kingdom, March 14, 2017.

American Mathematical Society Joint Mathematics Meeting 2017, Special Session on Operator theory, function theory, and models, Atlanta, GA, January 4-7 2017.

Plenary Speaker, Northeastern Analysis Meeting, SUNY Brockport, Brockport, New York, October 14-16, 2016.

Plenary Speaker, Summer Informal Regional Functional Analysis Seminar (SUMIRFAS), Texas A&M University, College Station, Texas, July 29-31, 2016.

Probabilistic Harmonic Analysis and Spectral Theory, Institut Mittag-Leffler, Stockholm, Sweden, July 11- 15 2016.

Workshop on Operator Theory and Complex Analysis 2016, Coimbra, Portugal, June 21-24, 2016.

Singular Integrals and Partial Differential Equations, University of Helsinki, Helsinki, Finland, May 24-27 2016.

Virginia Operator Theory and Complex Analysis Meeting (VOTCAM), November 7 2015.

Completeness Problems, Carleson Measures, and Spaces of Analytic Functions, Institut Mittag-Leffler, Stockholm, Sweden, June 29-July 3 2015.

Mini-Course Instructor, Spring School of the French GDR Network Harmonic and Functional Analysis, Probability and Applications, June 4-6 2015.

Plenary Speaker, Conference on Harmonic Analysis, Operator Theory and Applications, Université de Bordeaux, Bordeaux, France, June 1-4 2015.

Multivariate Operator Theory, Banff International Research Station, Banff, Alberta, Canada, April 5-10 2015.

Plenary Speaker, Southeastern Analysis Meeting (SEAM) XXXI, University of Georgia, March 8-9 2015.

Function Spaces and Harmonic Analysis, Centre International de Rencontres Mathématiques, Marseille, France, October 27-31 2014.

AMSI/AustMS 2014 Workshop in Harmonic Analysis and its Applications, Macquarie University, Sydney, Australia, July 21-25 2014.

Plenary Speaker, International Analysis Conference, Chongqing University, Chongqing, China, June 26-29 2014.

Mini-Course Instructor, Summer School in Analysis, Chongqing University, Chongqing, China, June 23-25 2014.

Mini-Course Instructor, Summer School in Complex and Harmonic Analysis and Related Topics, University of Eastern Finland, Mekkijärvi, Finland, June 14-18 2014.

Plenary Speaker, Conference in Honor of Aline Bonami, Orléans, France, June 10-13 2014.

The Seventh Conference on Function Spaces, Southern Illinois University - Edwardsville, May 20-24 2014.

Hilbert Modules and Complex Geometry, Oberwolfach, April 20-26 2014.

American Mathematical Society Spring Sectional Meeting, Special Session on Harmonic Analysis and Operator Theory, University of New Mexico, April 5-6 2014.

American Mathematical Society Fall Sectional Meeting, Special Session on Operator Theory, Washington University St. Louis, October 18-20 2013.

Plenary Speaker, Invariant Subspaces of the Shift Operator, Centre de Recherches Mathématiques, Montreal, Canada, August 26-30 2013.

Plenary Speaker, Banach Algebras 2013, Gothenburg, Sweden, July 29 - August 4 2013.

Atlantic Association for Research in the Mathematical Sciences Workshop on Analytic Spaces and Their Operators, St. John's, Newfoundland and Labrador, Canada, July 9-12 2013.

Joint International Meeting of the AMS and the Romanian Mathematical Society, Special Session on Operator Theory and Function Spaces, June 27-30 2013.

Plenary Speaker, Chongqing Analysis Meeting IV, University of Chongqing, Chongqing, China, June 1 2013.

Plenary Speaker, Hilbert Function Spaces, Gargnano sul Garda, Italy, May 20 - May 24 2013.

Georgia Analysis Symposium, University of Georgia, March 1-2 2013.

Plenary Speaker, Recent Advances in Operator Theory and Operator Algebras, Bangalore, India, December 31 2012 - January 12 2013.

American Mathematical Society Fall Sectional Meeting, Special Session on Complex Analysis and its Broader Impacts, University of Akron, October 20-21 2012.

Mini-Course Instructor, Recent Advances in Harmonic Analysis and Spectral Theory, Texas A&M University, August 6-10 2012.

Plenary Speaker, 24th International Conference on Operator Theory, Timisoara, Romania, July 2-7 2012.

Plenary Speaker, The Corona Problem: Connections between Operator Theory, Function Theory and Geometry, Fields Institute, June 18-22 2012.

Plenary Speaker, Great Plains Operator Theory Symposium, University of Houston, May 29 - June 3 2012.

Plenary Speaker, Frames and Bases of Analytic Functions, Toulouse, France, May 23-25 2012.

Operator Related Function Theory, Erwin Schrödinger Institute, Vienna, Austria, March 26-31 2012.

American Mathematical Society Spring Sectional Meeting, Special Session on Holomorphic Spaces, University of Hawaii, March 3-4 2012.

American Mathematical Society Joint Mathematics Meeting 2012, Special Session on Several Complex Variables and Multivariable Operator Theory, Boston, MA, January 4-7 2012.

American Mathematical Society Fall Sectional Meeting, Special Session on Multivariable Operator Theory, Cornell University, September 10-11 2011.

Approximation Theory and Harmonic Analysis Workshop, Kennesaw State University, May 14-15 2011.

Second Buea International Conference on the Mathematical Sciences, Buea, Cameroon May 8-13 2011.

Plenary Speaker, Southeastern Analysis Meeting (SEAM) XXVII, University of Florida, March 17-19 2011.

Invited Address, American Mathematical Society Southeast Sectional Meeting, Georgia Southern University, March 12-13 2011.

Waves and Spectra, Texas A&M University, January 11-14 2011.

Wellposedness and Controllability of Evolution Equations, Oberwolfach, December 12-18 2010.

Operator Theory and Harmonic Analysis, Oberwolfach Conference, October 31 - November 6 2010.

American Mathematical Society Fall Sectional Meeting, Special Session on Harmonic Analysis, Syracuse University, October 2-3 2010.

Multivariate Operator Theory, Banff International Research Station, August 15-20 2010.

Harmonic Analysis: A Retrospective Workshop, Fields Institute, May 31 - June 4 2010.

Plenary Speaker, UK Harmonic Analysis and PDE Research Network, Glasgow, February 23 2010.

Auburn Conference on Harmonic Analysis and Related Topics, December 3-5 2009.

Workshop on Operator Theory and Applications, International Centre of Mathematical Sciences, Edinburgh, September 7-11 2009.

Seminar for the Research Programme: Harmonic Analysis, Geometric Measure Theory and Quasiconformal Mappings, May 10-25 2009.

Hilbert Modules and Complex Geometry, Oberwolfach Conference, April 6-10 2009.

Auburn Conference on Harmonic Analysis and Related Topics, November 20-22 2008.

St. Petersburg Summer Meeting in Mathematical Analysis, June 23 -27 2008.

Seminar at the Workshop in Analysis and Probability, Texas A&M University, Summer 2005, Summer 2006, Summer 2008.

American Mathematical Society Spring Sectional Meeting, Special Session on Harmonic Analysis, University of Indiana – Bloomington, April 5-6 2008.

Southeastern Analysis Meeting (SEAM) XXIII, University of Richmond, March 9-11 2007.

Prairie Analysis Seminar, October 13-14 2006.

Plenary Speaker, Southeastern Analysis Meeting (SEAM) XXII, University of Florida, March 2-5 2006.

International Workshop on Operator Theory and its Applications (IWOTA), Newcastle England, July 12-16 2004.

### **Conference and Workshop Participation:**

International Workshop on Operator Theory and its Applications (IWOTA), Washington University - St. Louis, July 18-22, 2016.

Southeastern Analysis Meeting (SEAM) XXX, Clemson University, March 7-8 2014.

Southeastern Analysis Meeting (SEAM) XXIX, Virginia Tech, March 15-16 2013.

Weighted Inequalities for Singular Integral Operators, American Institute of Mathematics, October 10-14 2011.

Southeastern Analysis Meeting (SEAM) XXVI, Georgia Institute of Technology, March 2010.

Centro Internazionale per la Ricerca Matematica Research in Pairs: Bilinear Forms on Spaces of Analytic Functions, Trento, Italy, June 14-28 2009.

Harmonic Analysis, Geometric Measure Theory and Quasiconformal Mappings, May 10-25 2009.

Oberwolfach, Research in Pairs: Logarithmic Mean Oscillation and Hankel Operators, March 23 - April 4 2009.

Small Ball Inequalities in Analysis, Probability, and Irregularities of Distribution, American Institute of Mathematics, December 7-13 2008.

Workshop in Analysis and Probability, Texas A & M University, Summer 2005, Summer 2006, Summer 2008.

Function Spaces and Their Operators, A Conference in Honor of Richard Rochberg, Washington University – St. Louis, May 28-31 2008.

Southeastern Analysis Meeting (SEAM) XXIV, Vanderbilt University, March 5-9 2008.

Thematic Program on New Trends in Harmonic Analysis, Fields Institute, January – June 2008.

Potential Theory and its Applications, A Conference in Honor of Björn Gustafsson, The Royal Institute of Technology (KTH), October 17 2007.

The Kadison-Singer Problem, American Institute in Mathematics, September 25-29 2006.

Shanks Workshop: Composition of Haar Paraproducts, Vanderbilt University, May 20-21 2006.

BANFF–PIMS, Research in Teams: Multi-Parameter Nehari Theorems, March 20-24 2006.

Workshop on Multi-Scale Geometry and Analysis in High Dimensions, Institute for Pure and Applied Mathematics, UCLA, November 8-12 2004.

Summer School on Hamiltonian Mechanics and Integrable Systems, UCLA/Cal Tech, September 12-17 2004.

NSF/CBMS Regional Conference in Mathematical Sciences: Wave packets, Multi-linear Operators and Carleson Theorems, Georgia Tech, May 23-28 2004.

Park City Mathematics Institute Summer School on Harmonic Analysis and Partial Differential Equations, Park City, Utah, June 29 - July 19 2003.

Spring School on Analysis in Paseky, Czech Republic, June 1-7 2003.

### **Conferences and Workshops Organized:**

Special Session: Harmonic Analysis and Applications, American Mathematical Society Southeast Sectional Meeting, University of Georgia, March 5-6 2016.

NSF/CBMS Regional Conference in the Mathematical Sciences: Uncertainty Principles in Harmonic Analysis: Gap and Type Problems, June 17-22 2013.

The Corona Problem: Connections between Operator Theory, Function Theory and Geometry, Fields Institute, June 18-22 2012.

MSRI Summer Graduate Workshop “The Dirichlet Space: Connections between Operator Theory, Function Theory, and Complex Analysis”, June 20 - July 1 2011.

Centre International de Mathématiques Pures et Appliquées (CIMPA School): “Real and Complex Analysis with Applications to other Sciences”, Buea (Cameroon), May 1-14 2011.

Special Session: Harmonic Analysis and Applications, American Mathematical Society Southeast Sectional Meeting, Georgia Southern University, March 12-13 2011.

Southeastern Analysis Meeting (SEAM) XXVI, Georgia Institute of Technology, March 25-28 2010.

Southeastern Analysis Meeting (SEAM) XXIV, Vanderbilt University, March 5-9 2008.

### **Research Programs:**

Hausdorff Institute for Mathematics Research in Groups: Borderline Problems with Singular Integrals, May 17 - June 12 2015 and May 22 - June 17 2016.

Banff–PIMS, Research in Teams: Sarason Conjecture and the Composition of Paraproducts, November 4-11 2012.

Centro Internazionale per la Ricerca Matematica Research in Pairs: Bilinear Forms on Spaces of Analytic Functions, Trento, Italy, June 14-28 2009.

Oberwolfach, Research in Pairs: Logarithmic Mean Oscillation and Hankel Operators, March 23 - April 4 2009.

Shanks Workshop: Composition of Haar Paraproducts, Vanderbilt University, May 20-21 2006.

Banff-PIMS, Research in Teams: Multi-Parameter Nehari Theorems, March 20-24 2006.

## **Professional Service:**

### **Scholarly Service:**

### **Referee and Review Service:**

Member of the NSF Division of Mathematical Sciences Panel (3).

Member of the NSF Division of Mathematical Sciences CAREER Panel.

Reviewer for Israel Science Foundation Grant Proposals.

Reviewer for The Royal Society of New Zealand Marsden Fund Grant Proposals.

Reviewer for Natural Sciences and Engineering Research Council of Canada (NSERC) Proposals (3).

Reviewer for National Science Centre of Poland.

Reviewer for The Croatian Science Foundation.

Reviewer for NSF Grant Proposals (2).

External Reviewer for PhD Theses: University of Helsinki, University of Toulouse, University of Barcelona.

Reviewer for the Bulletin of the American Mathematical Society

Reviewer for Math Reviews (57).

Reviewer for Zentralblatt Math (76).

Referee for: Ann. Acad. Sci. Fenn. Math., Acta Math. Sci. Ser. B Engl. Ed., Adv. Math., Adv. Pure Appl. Math., Amer. J. Math. (2), Ann. Inst. Fourier (2), Ann. Mat. Pura Appl., Appl. Comput. Harmon. Anal., Bull. Korean Math. Soc., Bull. Sci. Math., Canad. J. Math. (3), Canad. Math. Bull. (2), Collect. Math. (2), Commun. Contemp. Math., Commun. Pure Appl. Anal., Complex Anal. Oper. Theory (7), Complex Var. Elliptic Equ. (2), Congr. Oper., CRM Monograph Series, European J. Math., Forum Math., Glasg. Math. J. (2), Houston J. Math. (2), Illinois J. of Math., Indiana Math. J. (3), Integral Equations Operator Theory (6), Int. Math. Res. Not. (2), Israel J. Math. (2), J. Aust. Math. Soc., J. Anal. Math., J. Eur. Math. Soc., J. Fourier Anal. Appl. (3), J. Franklin Inst., J. Funct. Anal. (18), J. Funct. Spaces Appl., J. Geo. Anal. (2), J. London Math. Soc. (6), J. Math. Anal. Appl. (3), J. Reine Angew. Math. (2), Math. Control Signals Systems, Math. Nachr. (2), Math. Res. Lett., Michigan Math. J., Potential Anal. (2), Oper. Matrices, Proc. Amer. Math. Soc. (11), Proc. Edinb. Math. Soc., Proc. Roy. Soc. Edinburgh Sect. A, Pub. Mat. (2), Rev. Mat. Iberoam. (3), Studia Math. (2), Trans. Amer. Math. Soc. (4), Misc. Conference Proceedings (5).

**Editorial Service:**

Editor for [Analysis Mathematica](#), Spring 2017 – Present.

Editor for [New York Journal of Mathematics](#), Spring 2015 – Present.

Associate Editor for [Complex Analysis and its Synergies](#), Spring 2013 – Present.

Editor for [IMHOTEP: African Journal of Pure and Applied Mathematics](#), Spring 2012 – Present.

**Departmental Service:**

**Washington University – St. Louis:**

Department of Mathematics Executive Committee, Fall 2016 - Spring 2017.

Department of Mathematics Hiring Committee, Fall 2016 - Spring 2017.

Department of Mathematics Graduate Committee, Fall 2015 - Spring 2016.

**Georgia Institute of Technology:**

School of Mathematics Postdoc Committee, Fall 2013 - Spring 2015.

School of Mathematics Junior P&T Committee, Fall 2013 - Spring 2015.

School of Mathematics Graduate Committee, Spring 2012 - Spring 2014.

School of Mathematics Colloquium Committee, Fall 2011 - Spring 2012.

School of Mathematics Thesis Committee: Gagik Amirkhanyan (Spring 2014), Maria Reguera-Rodriguez (Spring 2011).

Organizer of Analysis Seminar, Fall 2009, Fall 2010 - Spring 2015.

School of Mathematics Oral Exam Committee: Gagik Amirkhanyan (Summer 2013), Chris Pryby (Fall 2012), Maria Reguera-Rodriguez (Fall 2010).

**University Service:**

**Washington University – St. Louis:**

Graduate School, Teaching and Professional Development Committee Fall 2017 - Spring 2018.

**Mentoring Activities:**

**Postdoctoral Fellows Mentored:**

[Michael Hartz](#), Washington University – St. Louis, Fall 2016 – Present.  
Alexander von Humboldt Foundation Feodor Lynen Research Fellow

[Irina Holmes](#), Washington University – St. Louis, Fall 2014 – Spring 2017.  
National Science Foundation Mathematical Sciences Postdoctoral Research Fellow

**Kelly Bickel**, Georgia Institute of Technology, Fall 2013 – Spring 2014.

First Employment: Bucknell University

**Mishko Mitkovski**, Georgia Institute of Technology, Fall 2010 – Spring 2012.

First Employment: Clemson University

Svetlana Poznanovik, Georgia Institute of Technology, Fall 2011 – Spring 2012 (teaching).

David Murrugarra, Georgia Institute of Technology, Fall 2012 – Spring 2014 (teaching).

### **PhD Students Advised:**

Cody Stockdale, Washington University – St. Louis, Fall 2016 – Present.

Marie-Jose Saad, Washington University – St. Louis, Spring 2016 – Present.

**Darío Mena Arias**, Georgia Institute of Technology, Ph.D., Fall 2014 – Present.

**Ishwari Kunwar**, Georgia Institute of Technology, Ph.D., Fall 2014 – Summer 2017.

Thesis Title: Multilinear Dyadic Operators and Their Commutators

First Position: Kennesaw State University

**Philip Benge**, Washington University – St. Louis, Fall 2013 – Spring 2017.

Thesis Title: Paraproducts and Well Localized Operators

First Position: Mississippi School for Mathematics and Science

**Robert Rahm**, Washington University – St. Louis, Ph.D., Fall 2013 – Spring 2017.

Thesis Title: Weighted Inequalities for Three Operators

First Position: Postdoctoral Fellow at Texas A&M University

**James Scurry**, Georgia Institute of Technology, Ph.D., Fall 2008 – Spring 2013.

Thesis Title: One and Two Weight Theory in Harmonic Analysis

Best PhD Thesis in the School of Mathematics Academic Year 2012 – 2013

### **Visiting Students Mentored:**

Taneli Korhonen, University of Eastern Finland, (visiting Washington University – St. Louis), Fall 2016.

Roc Oliver Vendrell, University of Barcelona, (visiting Washington University – St. Louis), Fall 2015.

Mustafa Cemil Bişgin, Erciyes University, (visiting Georgia Institute of Technology), Fall 2013 – Spring 2014.