Adrian Ioana

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Education

Ph.D. Mathematics, University of California, Los Angeles, June 2007. Advisor: Sorin Popa.

B.S. Mathematics, University of Bucharest, Romania, June 2003.

Employment

Professor, University of California, San Diego, 2015-present.

Associate Professor, University of California, San Diego, 2013-2015.

Assistant Professor, University of California, San Diego, 2011-2013.

Clay Research Fellow, 2008-2011.

Olga Taussky-John Todd Instructor, Caltech, 2007-2008.

Research Interests

Operator Algebras (von Neumann algebras, C*-algebras),
Ergodic Theory (measured group theory, orbit equivalence),
Group Theory (analytic, geometric and representation theoretic aspects),
Logic (descriptive set theory, continuous model theory).

Awards, Grants and Honors

Simons Fellowship, 2022-2023.

NSF Grant DMS-2153805, 2022-2025.

NSF FRG Grant 1854074, 2019-2022.

Invited 45 minutes lecture, International Congress of Mathematicians (ICM),
Section 8 (Analysis and Operator Algebras), Rio de Janeiro, August 2018.

Invited Address, AMS Western Spring Sectional Meeting, Albuquerque, April 2014.

Sloan Foundation Fellowship, 2013-2015.

"Dimitrie Pompeiu" Prize for the year 2011 (awarded by the Romanian Academy in 2013).

NSF Career Grant DMS-1253402, 2013-2018.

EMS Prize (awarded by the European Mathematical Society), 2012.

NSF Grant DMS-1161074, 2012-2015.

Bourbaki Seminar partly on item 5 from my list of publications, 2011.

Clay Research Fellowship, 2008-2011.

Clay Liftoff Fellowship, Summer 2007.

Dissertation Year Fellowship (UCLA), 2006-2007.

Member of the Institute of Mathematics of the Romanian Academy, since 2006.

Horn-Moez Prize for excellence in first-year graduate studies (UCLA), 2004.

Ranked first among mathematics major students, University of Bucharest, 2003.

Merit Scholarship, University of Bucharest, 2000-2003.

Silver medal, International Mathematics Olympiad, 1999.

First place, Romanian National Mathematics Olympiad (10th grade), 1997.

Publications

1. A. Ioana, *A relative version of Connes $\chi(M)$ invariant and existence of orbit inequivalent actions*, Erg. Th. Dynam. Sys. **27** (2007), 1199–1213.

2. A. Ioana, J. Peterson and S. Popa, *Amalgamated free products of weakly rigid factors and calculation of their symmetry groups*, Acta Math. **200** (2008), 85–153.

3. A. Ioana, *Rigidity results for wreath product II_1 factors*, J. Funct. Anal. **252** (2007), 763–791.

4. A. Ioana, *Non-orbit equivalent actions of $\mathbb{F}_n$*, Ann. Sci. Éc. Norm. Supér **42**, fascicule 4 (2009), 675–696.

5. A. Ioana, *Orbit inequivalent actions for groups containing a copy of $\mathbb{F}_2$*, Invent. Math. **185** (2011), 55–73.

6. A. Ioana, *Cocycle superrigidity for profinite actions of property (T) groups*, Duke Math. J. **157** (2011), 337–367.

7. I. Chifan, A. Ioana, *Ergodic subequivalence relations induced by a Bernoulli action*, Geom. Funct. Anal. Vol. **20** (2010), 53–67.

8. A. Ioana, A.S. Kechris, T. Tsankov, *Subequivalence relations and positive-definite functions*, Groups Geom. Dyn., **3** (2009), 579–625.

9. A. Ioana, *Relative property (T) for the subequivalence relations induced by the action of SL(2,$\mathbb{Z}$) on $\mathbb{T}^2$*, Adv. Math. **224** (2010), 1589–1617.

10. I. Chifan, A. Ioana, *On Relative Property (T) and Haagerup's Property*, Trans. Amer. Math. Soc. **363** (2011), 6407–6420.

11. I. Chifan, A. Ioana, *On a Question of D. Shlyakhtenko*, Proc. Amer. Math. Soc. **139** (2011), 1091–1093.

12. A. Ioana, *W*-superrigidity for Bernoulli actions of property (T) groups*, J. Amer. Math. Soc. **24** (2011), 1175–1226.

13. A. Ioana, S. Vaes, *Rigid actions need not be strongly ergodic*, Proc. Amer. Math. Soc. **140** (2012), no. 9, 3283–3288.

14. A. Ioana, S. Popa, S. Vaes, *A class of superrigid group von Neumann algebras*, Ann. of Math. **178** (2013), 231–286.

15. A. Ioana, Y. Shalom, *Rigidity for equivalence relations on homogeneous spaces*, Groups Geom. Dyn. **7** (2013), 403–417.

16. A. Ioana: *Uniqueness of the group measure space decomposition for Popa's $\mathcal{HT}$ factors*, Geom. Funct. Anal. **22** (2012), 699–732.

17. A. Ioana: *Compact actions and uniqueness of the group measure space decomposition of II_1 factors*, J. Funct. Anal. **262** (2012), 4525–4533.

18. A. Ioana: *Cartan subalgebras of amalgamated free product II_1 factors. With an appendix joint with Stefaan Vaes*, Ann. Sci. Éc. Norm. Supér (4) **48** (2015), no. 1, 71-130..

19. A. Ioana: *Classification and rigidity for von Neumann algebras*, European Congress of Mathematics, published by the EMS (2013), 601-625.

20. Y. Dabrowski, A. Ioana: *Unbounded derivations, free dilations and indecomposability results for II_1 factors*, Trans. Amer. Math. Soc. **368** (2016), no. 7, 4525-4560.

21. I. Chifan, A. Ioana, Y. Kida: *W^*-superrigidity for arbitrary actions of central quotients of braid groups*, Math. Ann. **361**(2015), 563-582.

22. A. Ioana: *Orbit equivalence and Borel reducibility rigidity for profinite actions with spectral gap*, J. Eur. Math. Soc. (JEMS) **18** (2016), no. 12, 2733-2784.

23. A. Ioana: *Strong ergodicity, property (T), and orbit equivalence rigidity for translation actions*, J. Reine Angew. Math. **733** (2017), 203-250.

24. R. Boutonnet, A. Ioana, A. Salehi Golsefidy: *Local spectral gap in simple Lie groups and applications*, Invent. Math. **208** (2017), no. 3, 715-802.

25. A. Ioana, R. Tucker-Drob: *Weak containment rigidity for distal actions*, Adv. Math. **302** (2016), 309-322.

26. R. Boutonnet, I. Chifan, A. Ioana: *II_1 factors with non-isomorphic ultrapowers*, Duke Math. J. **166** (2017), no. 11, 2023-2051.

27. L. Bowen, D. Hoff, A. Ioana: *von Neumann's problem and extensions of non-amenable equivalence relations*, Groups Geom. Dyn. **12** (2018), no. 2, 399-448.

28. D. Gaboriau, A. Ioana, R. Tucker-Drob: *Cocycle superrigidity for translation actions of product groups*, American Journal of Mathematics, Volume **141**, Number 5, October 2019, pp. 1347-1374.

29. D. Drimbe, D. Hoff, A. Ioana: *Prime II_1 factors arising from irreducible lattices in products of rank one simple Lie groups*, J. Reine. Angew. Math., **757** (2019), 197-246.

30. R. Boutonnet, A. Ioana: *Local spectral gap in the group of Euclidean isometries*, International Mathematics Research Notices, Volume 2020, Issue 2, January 2020, Pages 466-486.

31. I. Chifan, A. Ioana: *Amalgamated free product rigidity for group von Neumann algebras*, Adv. Math. **329** (2018), 819-850.

32. A. Ioana: *Rigidity for von Neumann algebras*, Proceedings of the International Congress of Mathematicians (ICM 2018), pp. 1639-1672 (2019).

33. A. Ioana: *Compact actions whose orbit equivalence relations are not profinite*, Adv. Math. **354**, 1 October 2019, 106753.

34. A. Ioana, P. Spaas: *A class of II$_1$ factors with a unique McDuff decomposition*, Mathematische Annalen (2019) 375:177-212.

35. R. Boutonnet, A. Ioana, J. Peterson: *Properly proximal groups and their von Neumann algebras*, Ann. Sci. Éc. Norm. Supér. (4) **54** (2021), no. 2, 445-482.

36. A. Ioana, P. Spaas: *II$_1$ factors with exotic central sequence algebras*, J. Inst. Math. Jussieu 20 (2021), no. 5, 1671-1696.

37. A. Ioana: *Stability for product groups and property (τ)*, J. Funct. Anal. **279** (2020), no. 9, 108729, 32 pp.

38. D. Drimbe, A. Ioana and J. Peterson: *Cocycle superrigidity for profinite actions of irreducible lattices*, Groups Geom. Dyn. 17 (2023), no. 1, 315-329.

39. A. Ioana, P. Spaas and M. Wiersma: *Cohomological obstructions to lifting properties for full C^*-algebras of property (T) groups*, Geom. Funct. Anal. **30** (2020), no. 5, 1402-1438.

40. A. Ioana: *On sofic approximations of $\mathbb{F}_2 \times \mathbb{F}_2$*, Ergodic Theory Dynam. Systems **42** (2022), no. 7, 2333-2351.

41. I. Chifan, D. Drimbe, A. Ioana: *Embedding universality for II$_1$ factors with property (T)*, Adv. Math. 417 (2023), Paper No. 108934, 24 pp.

42. C. Horbez, J. Huang, A. Ioana: *Orbit equivalence rigidity of irreducible actions of right-angled Artin groups*, Compos. Math. 159 (2023), no. 4, 860-887.

43. I. Chifan, A. Ioana, D. Osin, B.Sun: *Wreath-like products of groups and their von Neumann algebras I: W^*-superrigidity*, preprint arXiv:2111.04708, Annals of Mathematics, accepted.

44. A. Ioana: *An introduction to von Neumann algebras*, Model Theory of Operator Algebras, Volume 11 in the series De Gruyter Series in Logic and Its Applications, 43-82.

45. I. Chifan, D. Drimbe, A. Ioana: *Tensor product indecomposability results for existentially closed factors*, preprint arXiv:2208.00259, Model Theory of Operator Algebras, Volume 11 in the series De Gruyter Series in Logic and Its Applications, 269-302.

46. I. Chifan, S. Kunnawalkam Elayavalli, A. Ioana: *An exotic II$_1$ factor without property Gamma*, preprint arXiv:2209.10645, Geometric and Functional Analysis, accepted.

47. A. Ioana: *Almost commuting matrices and stability for product groups*, preprint arXiv:2108.09589.

48. I. Chifan, A. Ioana, D. Osin, B. Sun: *Wreath-like products of groups and their von Neumann algebras II: Outer automorphisms*, preprint arXiv:2304.07457.

49. I. Chifan, A. Ioana, D. Osin, B. Sun: *Small cancellation and outer automorphisms of Kazhdan groups acting on hyperbolic spaces*, preprint arXiv:2304.07455.

50. A. Ioana, H. Tan: *On existentially closed II$_1$ factors*, preprint arXiv:2306.00474.

Teaching experience

UCSD

Fall 2021, *Math 20C Vector Calculus* (super lecture).

Winter 2021, *Math 142B (Introduction to Analysis)*.

Fall 2020, *Math 20C Vector Calculus, Math 96 Putnam Seminar* and *Math 142A (Introduction to Analysis)* (also Math 142A coordinator).

Winter 2020, *Math 142B (Introduction to Analysis)*.

Fall 2019, *Math 142A (Introduction to Analysis)* and *Math 247A (Topics in Real Analysis: Orbit Equivalence of Ergodic Group Actions)*.

Spring 2019, *Math 142B (Introduction to Analysis)*.

Winter 2019, *Math 142A (Introduction to Analysis)* and *Math 247A (Topics in Real Analysis: Introduction to von Neumann Algebras)*.

Winter 2018, *Math 109 (Mathematical Reasoning) and Math 240B (Real Analysis)*.

Fall 2017, *Math 109 (Mathematical Reasoning)* and *Math 240A (Real Analysis)*.

Fall 2016, *Math 31AH (Advanced Calculus)* and *Math 142A (Introduction to Analysis)*.

Spring 2016, *Math 220C (Complex Analysis)* and *Math 140C (Foundations of Real Analysis)*.

Winter 2016, *Math 220 B (Complex Analysis)*.

Spring 2015, *Math 31CH (Vector Calculus)*.

Fall 2014, *Math 31AH (Advanced Calculus)* and *Math 241A (Functional Analysis)*.

Spring 2014, *Math 247A (Topics in Real Analysis: Introduction to von Neumann Algebras)*.

Fall 2013, Winter 2014, and Spring 2014, *Math 140ABC (Foundations of Real Analysis)*.

Spring 2013, *Math 20F (Linear Algebra)*.

Winter 2013 and Spring 2013, *Math 142AB (Introduction to Analysis)*.

Spring 2012, *Math 20D (Introduction to Differential Equations)*.

Winter 2012, *Math 142A (Introduction to Analysis)*.

Winter 2012, *Math 247A (Topics in Real Analysis: Introduction to von Neumann Algebras)*.

UCLA

Winter 2010, *Math 110A (Abstract Algebra)*.

Caltech

Fall 2007 and Winter 2008, *Math 140AB (Functional Analysis: Introduction to Operator Algebras)*.

Supervision

PhD Students

Daniel Hoff, graduated Spring 2016, then Assistant Adjunct Professor at UCLA.

Daniel Drimbe, graduated Spring 2018, then PIMS Postdoctoral Fellow at University of Regina, Canada, then FWO Postdoctoral Fellow at KU Leuven, Belgium.

Pieter Spaas, graduated Spring 2019, then Assistant Adjunct Professor at UCLA, then Postdoctoral Fellow and Marie Skłodowska-Curie Postdoctoral Fellow at the University of Copenhagen, Denmark.

Hui Tan (Ph.D., 2018-).

Gregory Patchell (Ph.D., 2019-).

David Gao (Ph.D., 2022-).

Postdoctoral scholars

Rémi Boutonnet (2014-2015, supported by NSF Career Award DMS-1253402), then CNRS researcher at University of Bordeaux, France.

Matthew Wiersma (2019-2021, SEW Assistant Professor), then Assistant Professor at University of Winnipeg, Canada.

Srivatsav Kunnawalkam Elayavalli (2023-, SEW Assistant Professor).

Service

Editorial work

Proceedings of the American Mathematical Society, editor, 02/2015-01/2023, and coordinating editor for Analysis, 02/2020-01/2023.

Journal of Operator Theory, cooperating editor, 01/2016-12/2021, and editor 01/2022-present.

Journal of Group Theory, editor, 01/2018-present.

Conferences co-organized

Workshop *Group Operator Algebras: classification, structure and rigidity*, Banff International Research Station, 09/2024.

Workshop Series in von Neumann algebras and geometric group theory: **1st workshop** 10/2021 (online), **2nd workshop** 02/2023 (UCSD, local organizer), **3rd workshop** 04/2023 (University of Iowa).

Workshop *Classification problems in von Neumann algebras*, Banff International Research Station, 09/2019.

Member of the scientific organizing committee for the 2018 West Coast Operator Algebra Seminar.

Workshop *Classification of group von Neumann algebras*, American Insitute of Mathematics, 01/2018.

West Coast Operator Algebra Seminar, UCSD, 10/2015.

Workshop *von Neumann Algebras and Ergodic Theory*, UCLA, 09/2014.

Special Session on *Rigidity in von Neumann Algebras and Ergodic Theory*, AMS Sectional Meeting, UCLA, 10/2010.

Special Session on *Operator Algebras*, AMS Sectional Meeting, UC Riverside, 11/2009.

Workshop *von Neumann Algebras and Ergodic Theory*, UCLA, 03/2009.

Seminars co-organized

Learning Seminar in Quantum Information Theory, UCSD, Winter-Fall 2020.

Functional Analysis Seminar (Math 243), UCSD, 2017-2019.

Seminar in Operator Algebras (Math 243), UCSD, 2016-2017 and Spring 2012.

Learning Seminar on the Poisson Boundary, UCSD, Fall 2014 and Winter 2015.

Analysis Seminar, UCSD, 2012-2014.

High School Competitions

San Diego Honors Math Competition, 2012, 2014-2019.

Selected committees (at UCSD)

Chair of the Mathematics Department Hiring Committee: 2020-2022.

Member of the search committee for a position in Quantum Computation, joint between the CSE and Mathematics Departments, 2021-2022.

Faculty Leadership Academy Scholar, 2021.

Academic Senate Representative: 2017-2019.

Mathematics Department Council: 2015-2017.

Mathematics Department Hiring Committee: 2014-2016, 2017-2018 and 2019-2020.

Mathematics Department Graduate Admissions: 2012-2013 and 2013-2014.

Doctoral Committee: James Pascoe, David Zimmermann, Daniel Hoff, Daniel Drimbe, Thanakorn Prinyasart, Donlapark Pornnopparath, Nina Pikula, Pieter Spaas, Evangelos Nikitopoulos, Hui Tan, Gregory Patchell.

Panelist

NSF (4 times).

NSF (GRFP), 2016.

Simons Foundation Collaboration Grants (3 times).

Talks

Conference Talks

Groups and Operator Algebras Conference, Institute of Mathematics of Orsay, France, 06/2023.

Operator Algebras in the South meeting, University of Southampton, 05/2023.

Modern Trends in Operator Algebras Conference, UCLA, 03/2023.

Oberwolfach workshop C*-algebras, 08/2022.

ICM satellite conference Operator algebras, dynamics and groups, University of Copenhagen, 07/2022.

VOTCAM (Virginia Operator Theory and Complex Analysis Meeting), 10/2020. (online)

AMS meeting, Special Session Advances in Operator Algebras, UC Riverside, 11/2019.

Worskhop Maximal subgroups and (operator) subalgebras, IMPAN, Warsaw, Poland, 09/2019.

Oberwolfach workshop C*-algebras, 08/2019.

Tutorial (3 hours), BIRS workshop Model Theory and Operator Algebras, 11/2018.

Invited 45 minute lecture, International Congress of Mathematicians, Rio de Janeiro, 08/2018.

Quantitative Linear Algebra Culminating Workshop, Lake Arrowhead, CA, 06/2018.

Workshop *Approximation properties in Operator Algebras and Ergodic Theory*, IPAM, UCLA, 05/2018.

Tutorial (3 lectures), part of the Long Program *Quantitative Linear Algebra*, IPAM, UCLA, 03/2018.

Workshop *New Methods for Zimmer's Conjecture*, IPAM, UCLA, 01/2018.

AMS meeting, Special Session *Advances in Operator Algebras*, San Diego, 01/2018.

AMS meeting, Special Session *Advances in Operator Algebras*, UC Riverside, 11/2017.

Tutorial (4 lectures), Workshop *Model Theory of Operator Algebras*, UC Irvine, 09/2017.

von Neumann Algebras and Measured Group Theory, Institut Henri Poincaré, Paris, 07/2017.

Lecture series (3 lectures), *Ergodic Theory and Operator Algebras*, Texas A&M University, 06/2017.

GPOTS (plenary talk), Texas Christian University, 05/2017.

Operator Algebras and Mathematical Physics conference, Sendai (Japan), 08/2016.

Workshop *Groups, Dynamics, and Operator Algebras*, Queen Mary University, London (UK), 07/2016.

Lecture series (3 lectures), *Spring Institute on Noncommutative Geometry and Operator Algebras*, University of Bonn (Germany), 05/2016, part of the Hausdorff Trimester Program *von Neumann algebras*.

Mini-conference *Ergodic Theory and Logic*, UCLA, 01/2016.

East Coast Operator Algebras Symposium, University of Iowa, 10/2015.

Workshop *Noncommutative geometry*, Oberwolfach, 06/2015.

GPOTS (plenary talk), Purdue University, 05/2015.

Extended Probabilistic Operator Algebras Seminar, UC Berkeley, 05/2015.

Lecture series (4 lectures), *Thirtheenth Annual Spring Institute on Noncommutative Geometry and Operator Algebras*, Vanderbilt University, 05/2015.

ICM Satellite Conference on Operator Algebras and Applications, Cheongpung, Korea, 08/2014.

Invited Address, AMS Western Spring Sectional Meeting, Albuquerque, April 2014.

Von Neumann Algebras and Measurable Group Theory, KU Leuven, Belgium, 07/2013.

Intensive Month on Operator Algebra and Harmonic Analysis, Madrid, 05/2013.

West Coast Operator Algebra Seminar, Eugene, 10/2012.

Workshop on Applications to Operator Algebras, Fields Institute, Toronto, 09/2012.

Invited lecture, European Congress of Mathematics (45 minutes), Krakow, Poland, 07/2012.

Workshop von Neumann Algebras and Ergodic Theory, UCLA, 05/2012.

G^3 conference (Geometric Groups on the Gulf Coast), Pensacola Beach, 04/2012.

Workshop II$_1$ *factors: rigidity, symmetries and classification*, Institute Henri Poincaré, 05/2011.

Lecture series (6 lectures), *von Neumann algebras and ergodic theory of group actions*, Institute Henri Poincaré, 05/2011.

Lecture series (2 lectures), Workshop *Group actions on measure spaces*, Texas AM University, 03/2011.

Lecture series (4 lectures), Workshop *AGORA*, ENS Lyon, France, 06/2010.

Lecture series (2 lectures), *Eighth Annual Spring Institute on Noncommutative Geometry and Operator Algebras*, Vanderbilt University, 05/2010.

Workshop *C**-algebras*, Oberwolfach, 03/2010.

Workshop *Von Neumann algebras and group actions*, University of Copenhagen, 02/2010.

Concentration Week on *Approximation Properties of Discrete Groups and Operator Spaces*, Texas AM University, 08/2009.

Workshop *von Neumann Algebras and Ergodic Theory*, UCLA, 03/2009.

Workshop *Von Neumann Algebras and Ergodic Theory of Group Actions*, Oberwolfach, 10/2008.

The Sixth East Coast Operator Algebras Symposium, Pennsylvania State University, 10/2008.

Topics on von Neumann algebras, Banff, Canada, 03/2008.

West Coast Operator Algebra Seminar, Long Beach, 02/2008.

Workshop on von Neumann Algebras, Fields Institute, Toronto, 11/2007.

Workshop *von Neumann algebras and Ergodic Theory*, UCLA, 03/2007.

Groupoids in operator algebras and noncommutative geometry, Institute Henri Poincare, Paris, 03/2007.

Wabash Modern Analysis Seminar, Wabash College, 12/2006.

Topics on von Neumann algebras, Banff, Canada, 09/2006.

The Fourth East Coast Operator Algebras Symposium, Georgia Institute of Technology, Atlanta 09/2006.

21st International Conference in Operator Theory, Timisoara, Romania, 06/2006.

Beyond amenability: Groups, Actions and Operator Algebras, UCLA, 05/2006.

6th Operator Algebras International Conference, Bucharest, Romania, 08/2005.

Reunion du GDR Algebres d'Operateurs, Les Houches, France, 06/2005.

Third Annual Spring Institute on Noncommutative Geometry and Operator Algebras, Vanderbilt University, 05/2005.

AMS meeting, Special Session *Von Neumann Algebras and Noncommutative Ergodic Theory*, Vanderbilt University, 10/2004.

Colloquia and special lectures

IMAR (Institute of Mathematics of the Romanian Academy) monthly lecture, 06/2022.

PIMS Distinguished Lecture Series, University of Regina, Canada, 05/2021 (online).

Michigan State University and University of Michigan (joint), 04/2021 (online).

Ohio State University, 09/2020 (online).

Vanderbilt University, 10/2010 and 10/2017.

University of Iowa, 11/2012 and 03/2015.

Purdue University, 01/2013.

UCSD, 01/2011 and 10/2012.

University of Illinois at Chicago, 10/2010.

UCLA, 04/2010.

UC Riverside, 04/2009.

Caltech, 08/2008.

Seminar Talks

Functional Analysis Seminar, University of Oxford (UK), 05/2023 and 06/2023.

Analysis Seminar, University of Glasgow (UK), 05/2023.

Groups and Operator Algebras Seminar, University of Copenhagen (Denmark), 04/2023.

Operator Algebra Seminar, KU Leuven (Belgium), 04/2023.

Functional Analysis and Operator Algebras in Athens Seminar, 04/2022 (online).

Geometry and Analysis on Groups Seminar, University of Vienna, 03/2022 (online).

Subfactor Seminar, Vanderbilt University, 02/2022 (online).

Wales MPPM (Mathematical Physics-Physical Mathematics) Seminar, 11/2021 (online).

University of Copenhagen and Southern Denmark University joint Operator Algebra Seminar, 11/2021 (online).

Probabilistic Operator Algebras Seminar, UC Berkeley, 11/2021 (online).

UCSD Functional Analysis Seminar, 10/2021 (online).

Stability and testability, IAS, Princeton, 11/2020. (online).

Functional analysis seminar, UCLA, 03/2005, 10/2005, 05/2006, 10/2008, 01/2009, 10/2009, 02/2011, 11/2013, 04/2015, 10/2015, 01/2017, 10/2018, 06/2020 (online), 09/2020 (online) and 10/2021 (online).

Operator theory seminar, University of Iowa, 02/2017 and 09/2020 (online).

Caltech/UCLA logic seminar, Caltech, 10/2006 (2 talks), 11/2010, 11/2013, and 10/2015.

Geometry and Dynamics Seminar, ENS Lyon, 06/2014.

Linear Analysis Seminar, Texas AM University, 02/2014.

Geometry Seminar, Purdue University, 01/2013.

Subfactor Seminar, UC Berkeley, 10/2010.

Subfactor Seminar, Vanderbilt University, 10/2006, 01/2009, 10/2010 and 10/2017.

Operator algebra seminar, K.U. Leuven, Belgium, 06/2010.

Logic seminar, Caltech, 11/2008.

Geometry and topology seminar, Caltech, 10/2008.

Analysis seminar, UCLA, 05/2007.

Mathematical physics seminar, Caltech, 04/2007.

Operator algebras seminar, Purdue University, 12/2006.

Operator algebras seminar, Institut de Mathematiques de Jussieu, Paris, 12/2004.

Talks aimed at students

Groups and Operator Algebras event, University of Copenhagen (Denmark), expository talk aimed at Master's and PhD students, 04/2023.

Geometry and Analysis on Groups Seminar, University of Vienna, introductory talk aimed at Master's level students, 04/2022 (online).

Undergraduate Student Colloquium (UCSD), 11/2012, 12/2015 and 12/2018.

Graduate Student Colloquium (UCSD), 02/2016.

Longer visits

Academic Visitor, University of Oxford, UK, May and June 2023 (2 months).

Professeur Invité, Université Paris-Diderot, Paris 7, May 2011 (1 month).

ENS Lyon, France, June 2010 (2 weeks).

K.U. Leuven, Belgium, June 2010 (2 weeks).

Institute des Mathematiques de Jussieu, Paris, Fall 2004.