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Career

- Professor, UC San Diego, 2020–present.
- Associate Professor, UC San Diego, 2016–2020.
- Assistant Professor, The University of Texas at Austin, 2011–2016.
- L. E. Dickson Instructor, The University of Chicago, 2009–2011.
- Ph.D., Yale University, New Haven, CT, 2009.
- B.Sc., Sharif University of Technology, Tehran, Iran, 2002.

Visting positions

- Member, Institute for Advanced Study, Princeton, NJ, (Fall 2019).
- Visitor, Fields Institute, Toronto, ON, Canada, (July 2018).
- von Neumann Fellow, Institute for Advanced Study, Princeton, NJ, (Academic year 2015-16).
- Research Member, MSRI, Berkeley, CA, (Spring 2015).
- Visting Scholar, FIM, ETH, Zürich, Switzerland, (February 2014-August 2014)

Honors and Award

- International Congress of Mathematicians Speaker, Virtual ICM, 2022.
- Dean's Scholar, Physical Sciences, University of California, San Diego, 2016-21.
- von Neumann Fellowship, Institute for Advanced Study, 2015–16.
- Sloan Research Fellowship, 2014–2016.

Postdoctoral fellows mentored

- Pratyush Sarkar, UCSD, 2022-present
- Anthony Sanchez, UCSD, 2021-present.
- Nattalie Tamam, UCSD, 2018-2021.
- Han Li, UT Austin, 2014.

Graduate Students

- Zuo Lin, UCSD, not yet advanced to candidacy.
- Juno Seong, UCSD, 2026 expected.
- Jacqueline Warren, UCSD, June 2021.

- Taylor McAdam, UT Austin and UCSD, June 2019.
- Kathryn Dabbs, UT Austin, July 2017.

Research Papers

Research supported in parts by the NSF.

- E. Lindenstrauss, A. Mohammadi, Z. Wang, *Effective equidistribution for some one parameter unipotent flows,* Preprint. arXiv:2211.11099

- A. Mohammadi, *Finitary analysis in homogeneous spaces,* Proceedings of the ICM 2022, to appear.

- E. Lindenstrauss, A. Mohammadi, Z. Wang, *Polynomial effective equidistribution,* C. R. Math., to appear.

- E. Lindenstrauss, A. Mohammadi, *Polynomial effective density in quotients of $\mathbb{H}^3$ and $\mathbb{H}^2 \times \mathbb{H}^2$,* Invent. Math., to appear.

- A. Mohammadi, N. Tamam, *Property tau in positive characteristic,* Israel J. Math., to appear.

- A. Mohammadi, K. Rafi, *Benjamini-Schramm convergence of periodic orbits,* Geom. Dedicata, to appear.

- K. Mallahi-Karai, A. Mohammadi, A. Salehi Golsefidy, *Locally random groups,* Mich. Math. J., to appear.

- A. Mohammadi, H. Oh, *Isolations of geodesic planes in the frame bundle of a hyperbolic 3-manifold,* Compositio Math., to appear

- A. Eskin, M. Mirzakhani, A. Mohammadi, *Effective counting of simple closed geodesics on hyperbolic surfaces,* JEMS, to appear.

- E. Lindenstrauss, G. Margulis, A. Mohammadi, N. Shah, *Quantitative behavior of unipotent flows and an effective avoidance principle,* Journal d'Analyse, to appear.

- A. Mohammadi, A. Salehi Golsefidy, F. Thilmany, *Diameter of homogeneous spaces: An effective account,* Math. Ann., to appear.

- C. McMullen, A. Mohammadi, H. Oh, *Geodesic planes in the convex core of an acylindrical 3-manifold.* Duke Math. J., 171(5) (2022), 1029–1060.

- G. Margulis, A. Mohammadi, *Arithmeticity of hyperbolic 3-manifolds containing infinitely many totally geodesic surfaces,* Ergodic Theory and Dynam. Systems, special volume in the memory of A. Katok, to appear.

- M. Einsiedler, A. Mohammadi, *Effective arguments in unipotent dynamics,* to appear in a special volume dedicated to G. Margulis, Chicago University Press.

- M. Einsiedler, E. Lindenstrauss, A. Mohammadi, *Diagonal actions in positive characteristic.* Duke Math. J. 169(1) (2020), 117–175.

- M. Einsiedler, G. Margulis, A. Mohammadi, A. Venkatesh, *Effective equidistribution and property (τ).* J. Amer. Math. Soc., 33 (2020), 223–289.

- M. Aka, M. Einsiedler, H. Li, A. Mohammadi, *On effective equidistribution for quotients of* SL$(d, \mathbb{R})$. Israel J. of Math., 236 (2020), 365–391.

- A. Mohammadi, A. Salehi Golsefidy, *Measure rigidity for the action of semisimple groups in positive characteristic,* Geom. and Func. Anal., 28(1) (2018), 179–227.

- C. McMullen, A. Mohammadi, H. Oh, *Geodesic planes in hyperbolic 3-manifolds.* Invent. Math., 209 (2017), 425–461.

- C. McMullen, A. Mohammadi, H. Oh, *Horocycles in hyperbolic 3-manifolds,* Geom. and Func. Anal., 26(3), (2016), 961–973.

- A. Mohammadi, H. Oh, *Invariant Radon measures for unipotent flows and products of Kleinian groups,* Proc. of the AMS, 146 (2018), 1469–1479.

- G. Margulis, A. Mohammadi, H. Oh, *Closed geodesics and holonomies for Kleinian manifolds,* Geom. and Func. Anal., 24(3), (2014) 1608–1636.

- A. Mohammadi, H. Oh, *Classification of joinings for Kleinian groups,* Duke Math. J., 165(11), (2016), 2155–2223.

- A. Eskin, M. Mirzakhani, A. Mohammadi, *Isolation, equidistribution, and orbit closures for the* SL$(2, \mathbb{R})$ *action on Moduli space,* Ann. of Math., 182(2) (2015), 673–721.

- A. Mohammadi, H. Oh, *Matrix coefficients, Counting and Primes for orbits of geometrically finite groups,* J. European Math. Soc., 17(4), (2015), 837–897.

- A. Mohammadi, *On ergodic properties of the Burger-Roblin measure,* In "Thin groups and superstrong approximation", edited by Breuillard and Oh, Math. Sci. Res. Inst. Publ. 61, Cambridge Univ. Press. Cambridge 2014.

- A. Mohammadi, H. Oh, *Ergodicity of unipotent flows and Kleinian groups,* J. of the AMS, 28, (2015), 531–577.

- A. Mohammadi, A. Salehi Golsefidy, *Translates of horospherical measures and counting problems,* American J. Math., 136(5), (2014), 1301–1346.

- D. Kelmer, A. Mohammadi, *Logarithm laws for one parameter unipotent flows,* Geom. and Func. Anal., 22(3), (2012) 756--784.

- A. Mohammadi, K. Wortman, *Finiteness properties of* $\mathbf{G}(\mathbb{Z}[t])$ *for groups with* $\mathbb{Q}$-*rank 2,* Geometriae Dedicata, 164, (2013), 131–137.

- B. Farb, A. Mohammadi, *The extremal symmetry of arithmetic simplicial complexes,* Adv. Math., 231(2), (2012), 843–854

- A. Mohammadi, *Special case of effective equidistribution with explicit constants,* Ergodic Theory Dynam. Systems, 32(1), (2012), 237–247.

- G. Margulis, A. Mohammadi, *Quantitative version of the Oppenheim conjecture for inhomogeneous quadratic forms,* Duke Math. J., 158(1), (2011), 121–160.

- A. Mohammadi, *Measures invariant under horospherical subgroups in positive characteristic,* J. Mod. Dynamics, 5(2), (2011), 237–254.

- M. Einsiedler, A. Mohammadi, *A joining classification and a special case of Raghunathan's conjecture in positive characteristic,* (with an appendix by Kevin Wortman), J. Anal. Math., 116, (2012), 299–334.

- A. Mohammadi, A. Salehi Golsefidy, *Discrete transitive actions on vertices of Bruhat-Tits building,* Duke Math. J., 161(3), (2012), 483–544.

- A. Mohammadi, *Unipotent flows and isotropic quadratic forms in positive characteristic,* Int. Math. Res. Not., 20, (2011) 4535–4554.

- A. Mohammadi, A. Salehi Golsefidy, *Simultaneous Diophantine approximation on non-degenerate p-adic manifolds,* Israel J. Math., 188 (2012), 231–258.

- A. Mohammadi, A. Salehi Golsefidy, *S-Arithmetic Khintchine type theorem,* Geom. and Func. Anal., 19(4), (2009), 1147–1170.

- K. U. Bux, A. Mohammadi, K. Wortman, $SL_n(\mathbb{Z}[t])$ *is not* FP_{n-1}, Comm. Math. Helv., 85(1), (2010), 151–164.

Invited Talks

- March 2023, *Ergodic Theory and Spectral Theory Seminar*, University of California, Riverside, CA.
- February 2023, *Analysis Seminar*, University of California, Los Angeles, CA.
- January 2023, *Colloquium*, University of California, Berkeley, CA.
- December 2022, *Dynamical Systems Seminar*, 2 lectures, Seoul National University, Seoul, Korea.
- December 2022, *Ergodic Theory and Dynamical Systems*, 3 lectures, ICTS, Bengaluru, India.
- July 2022, *Graduate Mini-School in Groups and Dynamics*, 2 lectures, UT Austin, TX.
- July 2022, *ICM*, Virtual ICM, Sections 7 and 9.
- April 2022, *Dynamics of Group Actions Seminar*, Yale University, New Haven, CT.
- March 2022, *Arithmetic Groups*, IAS, Princeton, NJ.
- September 2021, *Number Theory Down Under 9*, Plenary Lecture, Virtual Conference, Sydney, Australia.
- August 2021, *Discrete Groups, Geometry and Arithmetic,* Virtual Conference in honor of M. S. Raghunathan's 80th birthday, TIFR, India.
- June 2021, *CMI-HIMR Dynamics and Geometry Online Summer School*, 5 lectures, Virtual Summer School, Bristol, UK
- June 2020, *Lattice Point Distributions and Homogeneous Dynamics*, Virtual Workshop, ICERM.
- June 2020, *Midwest Dynamics and Group Actions Seminar*, Virtual Seminar.
- February 2020, *Geometry Seminar,* University of California, Berkeley, CA.
- January 2020, *Geometry Seminar,* Caltech, Pasadena, CA.
- November 2019, *Number Theory Seminar,* Rutgers, New Brunswick, NJ.
- November 2019, *Number Theory Seminar,* CUNY, New York City, NY.
- October 2019, *Colloquium,* Yale University, New Haven, CT.
- October 2019, *Dynamics, Geometry and Combinatorics,* EPFL, Lausanne, Switzerland.
- December 2018, *Colloquium,* Yale University, New Haven, CT.

- October 2018, *Colloquium,* Ohio State University, OH.
- July 2018, *Dynamics: Topology and Numbers*, Max Plank Institute, Bonn, Germany.
- May 2018, *The Mathematical Legacy of Maryam Mirzakhani*, Stanford University, CA.
- May 2018, *Thin Groups in Number Theory, Geometry and Topology*, Rice University, TX.
- January 2018, *New Methods for Zimmer's Conjecture*, IPAM, Los Angeles, CA.
- April 2016, *Number Theory Seminar,* University of California, San Diego, CA.
- July 2016, *Mini Course on Homogeneous Dynamics, School on Algebraic, Geometric and Probabilistic Aspect of Dynamical Systems and Control Theory*, Trieste, Italy.
- June 2016, *Dynamics, Geometry and Number Theory,* Conference in Honor of G. Margulis' 70th Birthday, Paris, France.
- April 2016, *Special Dynamics Seminar,* University of California, San Diego, CA.
- March 2016, *Workshop on Thin Groups and Super Approximation,* IAS, Princeton, NJ.
- February 2016, *Analysis and PDE Seminar,* University of California Los Angeles, CA.
- January 2016, *Informal Geometry & Topology Seminar,* Stanford University, CA.
- January 2016, *Special Dynamics Seminar,* University of California, Berkeley, CA.
- October 2015, *Colloquium,* Wesleyan University, CT.
- October 2015, *Dynamics of Group Actions Seminar,* Yale University, New Haven, CT.
- September 2015, *RTG Working Seminar on Geometry, Dynamics and Topology,* University of Michigan, Ann Arbor, MI.
- September 2015, *Colloquium,* University of Michigan, Ann Arbor, MI.
- May 2015, *Advances in Homogeneous Dynamics,* MSRI, Berkeley, CA.
- March 2015, *Dynamics of Group Actions Seminar,* Yale University, New Haven, CT.
- Feb 2015, *MSRI's Introductory Workshop: Geometric and Arithmetic Aspects of Homogeneous Dynamics*, two lectures, Berkeley, CA.
- Nov 2014, *Dynamical Systems Seminar*, Pennsylvania State University, State College, PA.
- July 2014, *Program on Interactions between Dynamics of Group Actions and Number Theory,* Isaac Newton Institute, Cambridge, UK.
- March 2014, *Workshop on Flat surfaces and dynamics on moduli spaces,* MFO, Oberwolfach-Walke, Germany.
- Feb 2014, *Geometry Seminar,* ETH, Zürich, Switzerland.
- Oct 2013, *Colloquium,* University of North Texas, Denton, TX.
- July 2013, *Summer School on Homogeneous dynamics*, KIAS, Seoul, South Korea.
- May 2013, *Algebra Seminar*, Northwestern University, Evanston, IL.
- May 2013, *Rice dynamics meetings*, Rice University, Houston, TX.
- March 2013, *Conference on Equidistribution in Number Theory and Dynamics*, FIM, Zürich, Switzerland.
- Jan 2013, *Lie Theory Workshop,* University of California San Diego, San Diego, CA.
- Sep 2012, *Colloquium,* Rice University, Houston, TX.
- Sep 2011, *Conference on Dynamics on Homogeneous Spaces and Number Theory,* Ohio State University, Columbus, OH.
- March 2011, *Group Actions, Dynamics and Geometry Seminar,* Brown University, Providence, RI.
- Jan 2011, *Dynamical Systems Seminar,* Northwestern University, Evanston, IL.
- Dec 2010, *Algebra, Number Theory and Combinatorics,* University of Texas at Austin, Austin, TX.
- Nov 2010, *Cornell Dynamical Systems Seminar,* Cornell University, Ithaca, NY.

- Nov 2010, *Joint Number Theory/Dynamics Seminar,* University of Illinois at Chicago, Chicago, IL
- Nov 2010, *Special Session on Arithmetic, Groups and Geometry,* 2010 Fall Central Section Meeting, Notre Dame, IN.
- Nov 2010, *Special Session on Rigidity,* 2010 Fall Central Section Meeting, Notre Dame, IN.
- Oct 2010, *Number Theory Seminar,* University of Illinois at Urbana-Champaign, Urbana, IL.
- April 2010, *Number Theory Seminar,* University of Chicago, Chicago, IL.
- March 2010, *Algebra Seminar,* Indiana University, Bloomington, IN.
- February 2010, *Dynamics of Group Actions Seminar,* Yale University, New Haven, CT.
- January 2010, *Geometry Topology Seminar,* University of Chicago, Chicago, IL.
- December 2009, *Wasatch Topology Conference,* Park City, UT.
- November 2009, *Group Actions Seminar,* Princeton University, Princeton, NJ.
- September 2009, *Dynamics Seminar,* University of Texas at Austin, Austin, TX.
- March 2009, *Topology and Geometric Group Theory Seminar,* Cornell University, Ithaca, NY.
- January 2009, *Colloquium,* University of Iowa, Iowa City, IA.
- December 2008, *Geometry Seminar,* University of Michigan, Ann Arbor, MI.
- June 2008, *Conference on Equidistribution on Homogeneous Spaces,* Ohio State University, Columbus, OH.
- May 2008, *Ergodic Theory Seminar,* Ohio State University, Columbus, OH.
- March 2008, *Group Actions Seminar,* Princeton University, Princeton, NJ.
- November 2007, *Dynamics of Group Actions Seminar,* Yale University, New Haven, CT.
- October 2007, *Ergodic Theory Seminar,* Ohio State University, Columbus, OH.
- October 2007, *Group Action Seminar,* Brown University, Providence, RI.
- December 2006, *Dynamics of Group Actions Seminar,* Yale University, New Haven, CT.