REYNOLD FREGOLI

E-mail: reynoldfregoli@gmail.com
Website:
www.reynoldfregoli.com
(please consult for links to publications)

Department of Mathematics,
University of Michigan,
530 Church Street
Ann Arbor, MI 48109
Mobile Phone:+1 7348908737

Area: Mathematics

Education:

Ph.D. in Mathematics – Royal Holloway University of London, 2020. Advisor: Prof. Martin Widmer.

M.Sc. in Mathematics – University of Pisa, 2016. Advisor: Prof. Ilaria Del Corso.

B.Sc. in Mathematics – University of Pisa, 2014. Advisor: Prof. Ilaria Del Corso.

Employment:

Postodctoral Assistant Professor – University of Michigan, Sep 2023-current. Mentor: Prof. R. Spatzier.

Postodctoral Research Associate – University of Zürich, May 2021- Jul 2023. Mentor: Prof. A. Gorodnik.

Awards and Grants:

LMS Early Career Fellowship – University of York, Oct-Apr 2020. Mentor: Prof. V. Beresnevich.

Publications and Preprints: Available at www.reynoldfregoli.com/subpages/research

1. (with J. Cheng and B. Guo) *Higher-dimensional moving averages and submanifold-genericity*, https://arxiv.org/abs/2507.15498
2. (with P. Bandi and D. Kleinbock) *Submanifold-genericity of $\mathbb{R}^d$-actions and uniform multiplicative Diophantine approximation,* https://arxiv.org/abs/2504.02258
3. (with M. Björklund and A. Gorodnik) *Decorrelation estimates for translated measures under diagonal flows,* J. Mod. Dyn. 25 (2025), 401-441
4. *Sums of reciprocals of fractional parts II* (appendix w. M. Björklund and A. Gorodnik), https://arxiv.org/abs/2304.02566
5. *A remark on the set of exactly approximable vectors,* Proc. Amer. Math. Soc. 152 (2024), 3177-3182
6. (with D. Kleinbock) *On multiplicatively badly approximable vectors,* J. Number Theory 278 (2026) 570-621 (to appear)
7. (with C. Zheng) *A shrinking-target problem in the space of unimodular lattices in the three-dimensional Euclidean space*, Sel. Math. New Ser. 30, 57 (2024)
8. (with M. Björklund and A. Gorodnik) *A uniform metrical theorem in multiplicative Diophantine approximation,* Forum Math., Sigma (to appear)
9. *Multiplicatively badly approximable matrices up to logarithmic factors* Math. Proc. Cambridge Philos. Soc. 172 No.3 (2022), 685-703

10. *A note on bounded exponential sums,* Bull. Lond. Math. Soc. 53 No.2 (2021), 416-425

11. *On a counting theorem for weakly admissible lattices,* Int. Math. Res. Not. 2021 No.10 (2021), 7850-7884

12. *Sums of reciprocals of fractional parts,* Int. J. Number Theory 15 No.4 (2019), 789-797

Conferences/Workshops/Summer School Talks:

Jun 2025 – Workshop on Diophantine Approximation and Related Fields, York, UK (contributed)

Nov 2024 – Workshop on Dynamical Systems and Related Topics, Penn State, US (invited)

Jun 2024 – Dioph. Approximation, Fractal Geometry, and Related Topics, Paris, France (contributed)

May 2023 – Simons Semester on Dynamics 3 lectures, Warsaw, Poland (invited)

Dec 2022 – Ergodic Theory and Dynamical Systems, Bangalore, India (contributed)

Jul 2022 – Summer School on Group Actions, Ohalo, Israel (contributed)

Aug 2019 – Baikal Number Theory Conference, Ol'khon Island, Russia (contributed)

Recent Invited Seminar Talks:

Nov 2025 – Ergodic thms. for dilates of manifolds, New England Dynamics and Number Theory Online Seminar (organized by D. Kleinbock, F. Ramirez, and H. Li)

Nov 2025 – Ergodic thms. for dilates of curves and applications to Diophantine approx., UI Chicago, US

Jul 2025 – Ergodic thms. for dilates of curves and applications to Diophantine approx., TU Graz, Austria

Feb 2025 – Equidistribution of geometric sequences on nilmanifolds, Brandeis University, US

Jan 2025 – Equidistribution of geometric sequences on nilmanifolds, Ohio State University, US

Nov 2024 – Central limit theorems and higher-rank diagonal actions, University of Michigan, US

Sep 2023 – Some open problems in homogeneous dynamics, University of Michigan, US

May 2023 – Almost-sure estimates for sums of reciprocals of fractional parts, Online seminar in Diophantine approx. and related topics (organized by A. Marnat and N. Moshchevitin)

Apr 2023 – Shrinking target problems and the injectivity radius function, Scuola Normale Superiore, Pisa, Italy

Nov 2022 – Multiplicatively badly approximable vectors, University of York, UK

Oct 2022 – Multiplicatively badly approximable vectors, Online seminar in Diophantine approximation and related topics (organized by A. Marnat and N. Moshchevitin)

Oct 2022 – Multiplicatively badly approximable vectors, University of Zürich, Switzerland

Mar 2022 – Randomness and quantitative aspects of the Littlewood conjecture, Shanghai Jiao Tong University (online), China

Teaching Experience:

Fall 2025 – Introduction to Probability, University of Michigan

Winter 2025 – Calculus II, University of Michigan

Fall 2024 – Calculus I, University of Michigan

Winter 2024 – Introduction to Probability, University of Michigan

Fall 2023 – Calculus II, University of Michigan

Spring 2023 – Analysis 2 for Physics, University of Zürich

Fall 2022 – Research seminar supervisor, University of Zürich

Spring 2022 – Teaching assistant for Complex Analysis, University of Zürich

Fall 2021 Teaching assistant for Analysis III, University of Zürich

Service:

Conference organiser: Egham-Reading-London Arithmetic Statistics Seminars (ERLASS), Royal Holloway University of London, first seminar (December 2019)

Seminar organiser: Ergodic Theory and Dynamical Systems Seminar, joint University of Zürich and ETH Zürich, Sep 2022 - May 2023

Referee for: Int. J. Number Theory and Discrete Contin. Dyn. Syst., Crelle's Journal,

References:

Prof. Ralf Spatzier, University Michigan

Prof. Dmitry Kleinbock, Brandeis University

Prof. Alexander Gorordnik, University of Zürich

Prof. Martin Widmer, TU Graz

Dr. Robert Cochrane, University of Michigan