

Employment

- **Northwestern University** Assistant Professor, 2012–.
- **Harvard University** Benjamin Pierce Assistant Professor, 2008–2012.

Education

- **Hebrew University of Jerusalem**, Ph.D., December 2008,
Some Applications of Motivic Integration to Representation Growth.
Advisors: David Kazhdan, Alex Lubotzky.
- **Hebrew University of Jerusalem**, M.Sc., October 2003,
On Entropy, Spectrum and Mixing for Actions of Continuous Amenable Groups.
Advisor: Benjamin Weiss.
- **Technion**, B.A., mathematics, 1997.

Publications

1. N. Avni, *Spectral and mixing properties of actions of amenable groups*, **Electronic Research Announcements of the AMS** **11** (2005), 57–63.
2. N. Avni and S. Garion, *Connectivity of the product replacement graph of simple groups of bounded Lie rank*, **Journal of Algebra** **320** (2008), 945–960.
3. E. Hrushovski and D. Kazhdan with appendix by N. Avni, *The value ring of geometric motivic integration, and the Iwahori Hecke algebra of SL_2* , **GAFA** **17** (2008), 1924–1967.
4. N. Avni, U. Onn, A. Prasad and L. Vasserstein, *Similarity classes of 3×3 matrices over a local principal ideal ring*, **Communications in Algebra**, **37(8)**, (2009), 2601–2615. preprint at [ArXiv:0708.1608](https://arxiv.org/abs/0708.1608).
5. N. Avni, *Entropy theory for cross sections*, **GAFA** **19** (2010), 1515–1538, preprint at [ArXiv:math/0609273](https://arxiv.org/abs/math/0609273).
6. N. Avni, *Arithmetic groups have rational representation growth*, **Annals of Mathematics** (2) **174**, (2011), 1009–1056, preprint at [ArXiv:0803.1331](https://arxiv.org/abs/0803.1331).
7. N. Avni and B. Weiss, *Generating Product Systems*, **Journal of Modern Dynamics**, **4 (2)** (2010), 257–270, preprint at [Arxiv:0907.1201](https://arxiv.org/abs/0907.1201).
8. N. Avni, S. Lim, and E. Nevo, *On Commensurator Growth*, **Israel Journal of Mathematics** **188**, (2012), 259–279. preprint at [Arxiv:0911.1296](https://arxiv.org/abs/0911.1296).
9. A. Aizenbud, N. Avni, and D. Gurevich, *Gelfand Pairs over Close Fields*, **Commentary Math. Helv.** **87**, (2012), 929–962. preprint at [Arxiv:0910.3199](https://arxiv.org/abs/0910.3199).
10. N. Avni, B. Klopsch, U. Onn, and C. Voll, *On Representation Zeta Functions of Groups, and a Conjecture of Larsen–Lubotzky*, **C. R. Math. Acad. Sci. Paris, Ser. I** **348** (2010), 363–367.
11. N. Avni, B. Klopsch, U. Onn, and C. Voll, *Representation Zeta Functions Of Compact p -Adic Analytic Groups And Arithmetic Lattices*, **Duke Mathematical Journal** **162** (2013), 111–197. preprint at [ArXiv:1007.2900](https://arxiv.org/abs/1007.2900).

12. N. Avni, B. Klopsch, U. Onn, and C. Voll, *Representation zeta functions of some compact p -adic analytic groups*, **Proceedings of Recent Trends on Zeta Functions in Algebra and Geometry**, 295–330, *Contemp. Math.*, 566, Amer. Math. Soc., Providence, RI, 2012, preprint at [ArXiv:1011.6533](https://arxiv.org/abs/1011.6533).
13. N. Avni, T. Gelander, M. Kassabov, and A. Shalev, *Word Values in p -Adic and Adelic Groups*, to appear in **Bullatin of the LMS**.
14. N. Avni, B. Klopsch, U. Onn, and C. Voll, *Base Change and Representation Growth*, submitted for publication, preprint at [Arxiv:1110.6092](https://arxiv.org/abs/1110.6092).
15. A. Aizenbud and N. Avni, *Representation Growth and Rational Singularities of the Moduli Space of Local Systems*, submitted for publication. Preliminary version at [ArXiv:1307.0371](https://arxiv.org/abs/1307.0371).
16. N. Avni and M. Aka, *Can You Hear The Shape of an Arithmetic Lattice?*, in preparation.
17. A. Aizenbud and N. Avni, *Bounds on Representation Growths of Arithmetic Lattices*, in preparation.
18. A. Aizenbud and N. Avni, *Symplectic Graph Varieties*, in preparation.
19. N. Avni, E. Nevo, G. Perlman and A. Balaban, *Migration stop over patterns in blackcaps*, in preparation.

Grants

- Bat Sheva de Rothschild grant for summer school “Representation Growth”. 2009.
- NSF grant DMS 0901638. 2009-2012.
- NSF grant DMS 1303205. 2013–2016.
- BSF grant 2012247 (co PI). 2013–2017.

Awards

- Technion Excellence Program, 1994–1997.
- Technion President Award, 1994, 1995, 1996.
- Maxim Bykov Award, 1996.
- Excellence scholarship for Ph.D. students, 2004–2006.
- Giora Yishinski prize, 2004.
- Klein Prize, 2005.
- Clore Fellowship for Ph.D. students, 2006–2008.
- Shlomyok prize for finishing Ph.D. students, 2009.
- Levitzky Prize in Algebra of the Israeli Mathematical Union, 2009.
- Sloan research fellowship, 2014–2016.

Short-term visits

- Microsoft Research, Summer Intern, July-September 2005.
- Max Planck Institute for Mathematics, May-June 2007.

- UCLA, Visiting Student, Jan-June 2008.
- Hebrew University, July 2010, June 2011.
- ETH Zurich, December 2011.
- Weizmann institute, December 2013.
- Hausdorff institute, Bonn, July 2014 (pending).

Some Conferences

- AMS central sectional meeting, plenary address, April 2014.
- MSRI Model Theory and Applications to Number Theory, February 2014.
- Groups, Measures, and Asymptotic Invariants, Oberwolfach, August 2013.
- Midrasha Mathematicae on Words and Growth, Institute for advanced studies, Jerusalem, June 2012.
- Sde Boker workshop on Invariant Random Subgroups, February 2012.
- Plenary Speaker, Israel Mathematics Union Meeting 2009, Weizmann Institute. April 2009.

Teaching

Graduate Students

- Nan Shi.
- Andrew Reiser.

Graduate Committees

- Stewart Wilcox (Harvard Ph.D. 2011).
- Yonatan Barlev (Harvard Ph.D. 2012).
- Ishai Ilani (Hebrew University M.Sc. 2012).

Undergraduate courses: Linear algebra, Introduction to proofs, Integral calculus, Honors linear algebra and topology, Honors analysis, Abstract algebra.

Graduate courses: Representation varieties, Algebraic geometry ($\times 2$), Measure theory, Representation theory of compact groups, Finite linear groups, Arithmetic lattices, Geometry with valuations.

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