

PUBLICATION LIST

AVRAHAM AIZENBUD

PUBLISHED AND ACCEPTED PAPERS

- (1) *Relative de Rham Theory on Nash Manifolds*. Joint with Shachar Carmeli. To appear in Israel Journal of Mathematics.
- (2) *Bounds on multiplicities of symmetric pairs of finite groups*. Joint with Nir Avni. To appear in Forum of Mathematics, Sigma. (2024)
- (3) *Strong density of spherical characters attached to unipotent subgroups*. Joint with Joseph Bernstein and Eitan Sayag. To appear in the Israel Journal of Mathematics
- (4) *Finite Multiplicities Beyond Spherical Spaces*. Joint with Dmitry Gourevitch. Int. Math. Res. Not. IMRN (2024).
- (5) *Relative Frobenius Formula*. Joint with Nir Avni and Yoav Krauz. To appear in Journal of Algebra and its Applications.
- (6) *Symplectic complexity of reductive group actions* Joint with Dmitry Gourevitch. Indagationes Mathematicae (2023).
- (7) *Irreducibility of wave-front sets for depth zero cuspidal representations*. Joint with Dmitry Gourevitch and , Eitan Sayag. To appear in Journal of Lie Theory.
- (8) *McKay trees*. Joint with Inna Entova-Aizenbud. Algebraic Combinatorics (2023).
- (9) *A binary operation on irreducible components of Lusztig's nilpotent varieties I: definition and properties*. Joint with Erez Lapid. To appear in Pure and Applied Mathematics Quarterly (2023).
- (10) *Appendix A of [GK23]: Vanishing of vector-valued distributions on smooth manifolds*. Joint with Dmitry Gourevitch. JEMS (2023).
- (11) *Pointwise surjective presentations of stacks*. Joint with Nir Avni. Communications in Algebra (2022)
- (12) *WF-holonomicity of C-exp-class distributions on non-archimedean local fields*. Joint with Raf Cluckers. Forum of Mathematics, Sigma 2020/08 (2020).
- (13) *Homological multiplicities in representation theory of p-adic groups*. Joint with Eitan Sayag. Mathematische Zeitschrift (2020). ArXiv:1709.09886.
- (14) *Bounds on multiplicities of spherical spaces over finite fields*. Joint with Nir Avni. Journal of Pure and Applied Algebra 223/9 (2019). ArXiv:1609.07456.
- (15) *Invariant generalized functions supported on an orbit*. Joint with Dmitry Gourevitch. Israel Journal of Mathematics 255/1 (2018)
- (16) *Autoequivalences of the category of schemes*. Journal of Algebra 502 (2018). Joint with Adam Gal.
- (17) *Counting points of schemes over finite rings and counting representations of arithmetic lattices*. Joint with Nir Avni. Duke Mathematical Journal 167/14 (2018). ArXiv:0910.3659.
- (18) *Hausdorffness for Lie algebra homology of Schwartz spaces*. Joint with D. Gourevitch, B. Krötz and G. Liu. Mathematische Zeitschrift, 283/3 (2016). See also ArXiv 1403.5917 (2014).
- (19) *Holonomicity of the spherical character*. Joint with D. Gourevitch and A. Minchenko. Selecta mathematica 22/4 (2016). See also ArXiv:1501.01479 (2014).
- (20) *Representation growth and rational singularities of the moduli space of local systems*. Inventiones Mathematicae 204/1 (2016). Joint with Nir Avni. See also ArXiv:1307.0371 (2013).

- (21) *3-finite distributions on p-adic groups*. Joint with D. Gourevitch and Eitan Sayag.¹ *Advances in Mathematics* 285 (2015). See also ArXiv:1405.2540.
- (22) *Wave front set of Fourier transform of algebraic measures*, joint with Vladimir Drinfeld. *Israel Journal of Mathematics* (2015). See also ArXiv:1212.3630 (2012).
- (23) *Vanishing of certain equivariant distributions on spherical spaces*. *Mathematische Zeitschrift* 279 (2015). Joint with Dmitry Gourevitch. See also ArXiv:1311.6111 (2013).
- (24) *Derivatives for representations of $GL(n, R)$ and $GL(n, C)$* , joint with Dmitry Gourevitch, Siddhartha Sahi. *Israel Journal of Mathematics* (2015). See also ArXiv:1109.4374 (2011).
- (25) *Twisted homology for the mirabolic nilradical*, joint with Dmitry Gourevitch, Siddhartha Sahi. *Israel Journal of Mathematics* (2015). See also ArXiv:1210.5389 (2012).
- (26) *Vanishing of certain equivariant distributions on p-adic spherical spaces, and non-vanishing of spherical Bessel functions*. Joint with D. Gourevitch and Alex Kemarsky. *IMRN* (2014). See also ArXiv:1311.6111 (2013).
- (27) *A partial analog of integrability theorem for distributions on p-adic spaces and applications*. *Israel Journal of Mathematics*, 193/1 (2013). See also ArXiv:0811.2768 (2008).
- (28) *Smooth transfer of Kloosterman integrals (the Archimedean case)*, *American Journal of Mathematics* 135/1 (2013). Joint with Dmitry Gourevitch. See also ArXiv:1001.2490 (2010).
- (29) *Spherical pairs over close local fields*. *Commentarii Mathematici Helvetici*, 77/4 (2012). Joint with Nir Avni, Dmitry Gourevitch. See also ArXiv:0910.3199 (2009).
- (30) *Multiplicity Free Jacquet Modules*. *Canadian Mathematical Bulletin* 55 (2012). Joint with Dmitry Gourevitch. See also ArXiv:0910.3659 (2009)
- (31) Appendix D of [FLO12]: *Distinguished representations in the Archimedean case*, *Publications Mathematiques de l'IHES*, 115/1 (2012). Joint with Erez Lapid.
- (32) *Invariant distributions on non-distinguished nilpotent orbits with application to the Gelfand property of $(GL(2n, R), Sp(2n, R))$* . *Journal of Lie Theory* 22/1 (2012). Joint with Eitan Sayag. See also ArXiv:0810.1853 (2008)
- (33) *Disjoint pairs for $GL(n, R)$ and $GL(n, C)$* . *Comptes Rendus Mathematique*, 350/1-2 (2012). Joint with Omer Offen, Eitan Sayag.
- (34) *A quantum analogue of Kostant's theorem for the general linear group*. *Journal of Algebra* (2011). Joint with Oded Yacobi. See also ArXiv:1007.0133 (2010)
- (35) *Multiplicity one theorems*. *Annals of Mathematics*, 172/2 (2010). Joint with Dmitry Gourevitch, Steve Rallis, Gerard Schiffmann. See also ArXiv:0709.4215 (2007).
- (36) *Some regular symmetric pairs*. *Transactions of the AMS* 362/7 (2010). Joint with Dmitry Gourevitch. See also ArXiv:0805.2504 (2008).
- (37) *Uniqueness of Shalika functionals (the Archimedean case)*. *Pacific Journal of Mathematics* 243/2 (2009). Joint with Dmitry Gourevitch, Herve Jacquet. See also ArXiv:0904.0922 (2009).
- (38) *Multiplicity one theorem for $(GL(n+1, R), GL(n, R))$* . *Selecta Mathematica Journal* 15/2 (2009). Joint with Dmitry Gourevitch. See also ArXiv:0808.2729 (2008).
- (39) *De-Rham theorem and Shapiro lemma for Schwartz functions on Nash manifolds*. *Israel Journal of Mathematics* 177 (2010). Joint with Dmitry Gourevitch. See also ArXiv:0802.3305 (2008).
- (40) *Generalized Harish-Chandra descent, Gelfand pairs and an Archimedean analog of Jacquet-Rallis' Theorem*. *Duke Mathematical Journal* 149/3 (2009). Joint with Dmitry Gourevitch² See also ArXiv:0812.5063 (2008).
- (41) *$O(V+F), O(V)$ is a Gelfand pair for any quadratic space V over a local field F* . *Mathematische Zeitschrift* 261/2 (2009). Joint with Dmitry Gourevitch, Eitan Sayag. See also ArXiv:0711.1471 (2008).

¹With an appendix joint with Dmitry Gourevitch, Eitan Sayag and Alex Kemarsky.

²with an appendix joint with Dmitry Gourevitch and Eitan Sayag.

- (42) $(GL(n+1, F), GL(n, F))$ is a Gelfand pair for any local field F . *Compositio Mathematica* 144/6 (2008). Joint with Dmitry Gourevitch, Eitan Sayag. See also [ArXiv:0709.1273](#) (2007).
- (43) *Schwartz functions on Nash manifolds*. *IMRN* 2008/5 (2008). Joint with Dmitry Gourevitch. See also [ArXiv:0704.2891](#) (2007).

PREPRINTS

- (44) *Analytic holonomicity of real Cexp-class distributions* Joint with Raf Cluckers, Michel Raibaut, Tamara Servi. [ArXiv:2403.20167](#)
- (45) *Quotients of Nash Manifolds by Equivalence Relations* Joint with Shachar Carmeli, Dmitry Gourevitch, Lev Radzivilovski. [ArXiv:2304.02287](#)
- (46) *Geometric representations of group actions* Joint with Uri Bader. [ArXiv:2304.01337](#)
- (47) *A short proof of Hironaka's Theorem on freeness of some Hecke modules*. Joint with Eitan Sayag. [ArXiv:1709.08214](#).

MY PHD THESIS

- (48) [Gelfand pairs and invariant distributions](#)

PUBLISHED BOOKS (EDITOR)

- (49) *Representations of Reductive Groups - conference proceedings*. Joint with Dmitry Gourevitch, David Kazhdan, Erez Lapid. *Proceedings of Symposia in Pure Mathematics* (2019).

NOTES

- (50) *The Gelfand-Kazhdan Criterion as a necessary and sufficient criterion*. [ArXiv:2009.04230](#)
- (51) *A short proof of the Nullstellensatz*. [pdf](#).
- (52) *Functoriality in Morse theory on closed manifolds*. Joint with Frol Zapolsky. [ArXiv:0805.2131](#).

REPORTS

- (53) *Multiplicity one theorem in representation theory*. Joint with Dmitry Gourevitch. Report on [35,38]. 2009 annual report of the Max Planck Society - Jahrbuch. [pdf](#).
- (54) *Schwartz functions on Nash manifolds and applications to representation theory*. Report on [43,42,39,]. Oberwolfach Reports "Harmonische Analysis und Darstellungstheorie Topologischer Gruppen" 4/4, (2007).

PREPRINTS COVERED BY OTHER PUBLICATIONS

- (55) *On a Cohen-Macaulay Property of Spherical Varieties*. Joint with Eitan Sayag. Covered by [3,47,13]. [pdf](#).
- (56) *Generalized Harish-Chandra descent and applications to Gelfand pairs*. Joint with Dmitry Gourevitch³. [ArXiv:0803.3395](#)(2008). Covered by [40].
- (57) *An archimedean analog of Jacquet - Rallis theorem*. Joint [ArXiv:0803.3397](#)(2008). Covered by [40].
- (58) *A proof of the multiplicity one conjecture for $GL(n)$ in $GL(n+1)$* . Dmitry Gourevitch. [ArXiv:0707.2363](#)(2007). Covered by [35]

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- My ArXiv publications:
http://arxiv.org/find/math/1/au:+Aizenbud_A/0/1/0/all/0/1
- My publications on MathSciNet:
<http://www.ams.org/mathscinet/search/author.html?mrauthid=840909>

³with an appendix joint with Dmitry Gourevitch and Eitan Sayag.

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- [FLO12] Brooke Feigon, Erez Lapid, and Omer Offen. On representations distinguished by unitary groups. *Publ. Math. Inst. Hautes Études Sci.*, 115:185–323, 2012.
- [GK23] Dmitry Gourevitch and Eyal Kaplan. Multiplicity one theorems for the generalized doubling method (with an appendix by Avraham Aizenbud and Dmitry Gourevitch). *J. Eur. Math. Soc. (JEMS)*, 25(8):3007–3092, 2023.