NIR LEV – Curriculum Vitae

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Personal Details

Name:	Nir Lev
Born:	1977, Israel
Nationality:	Israeli
Marital status:	Married + 2
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Academic Education

2003-2008	Ph.D.	Mathematics, Direct Ph.D. Program, Tel-Aviv University. Supervisor: Prof. Alexander Olevskii. Awarded 2009.
2002-2003	M.Sc.	Mathematics, Tel-Aviv University. Continued in the Direct Ph.D. Program.
1999-2002	B.Sc.	Mathematics and Computer Science, Tel-Aviv University. Summa Cum Laude. Awarded 2002.

Academic Positions

2019-	Full Professor (tenured), Department of Mathematics, Bar-Ilan University.
2015-2019	Associate Professor (tenured), Department of Mathematics, Bar-Ilan University.
2012-2015	Assistant Professor, Department of Mathematics, Bar-Ilan University.
2011-2012	Postdoctoral Fellow, Centre de Recerca Matemàtica (CRM), Barcelona.
2009-2011	Postdoctoral Fellow, Department of Mathematics, Weizmann Institute of Science.
2008-2009	Wallenberg Postdoctoral Fellow, Department of Mathematics, Royal Institute of Technology (KTH), Stockholm.
2002-2008	Teaching Assistant, School of Mathematical Sciences, Tel-Aviv University.

Honors / Awards

2023	Frontiers of Science Award, International Congress of Basic Science (ICBS), Beijing.
2017	Erdős Prize in Mathematics, Israel Mathematical Union.
2017	Young Scientist Prize, Computational Methods and Function Theory (CMFT) .
2017	Rector's Prize for Scientific Innovation, Bar-Ilan University.
2006	Excellence in Teaching Award, Tel-Aviv University.
2005	Excellence in Ph.D. Studies Award, Tel-Aviv University.
2002	Excellence in Undergraduate Studies Award, Tel-Aviv University.
2001	Israel Parliament ("Knesset") Award for Outstanding Students.
2000	Rector's Distinction Award, Tel-Aviv University.

Grants / Fellowships

2025	Israel Science Foundation (ISF) Individual Grant, 5 years.
2021	Israel Science Foundation (ISF) Individual Grant, 4 years.
2017	Israel Science Foundation (ISF) Individual Grant, 4 years.
2016	European Research Council (ERC) Starting Grant, 5 years.
2013	Israel Science Foundation (ISF) Individual Grant, 4 years.
2012	Marie Curie Intra-European Fellowship (IEF) (not used).
2011	European Post-Doctoral Institute (EPDI) Fellowship (not used).

Conference Presentations

42. Harmonic and Spectral Analysis 2025, Online, October 8–10, 2025.
41. Modern trends in Fourier analysis, Centre de Recerca Matemàtica (CRM), Barcelona, Spain, June 2–6, 2025.
40. Banach spaces for analysts, Bedlewo, Poland, July 14–19, 2024.
39. Complex Analysis and Operator Theory, Holon, Israel, May 27–28, 2024.
38. Fourier Analysis and its applications, Budapest, Hungary, January 29–February 2, 2024.
37. Harmonic and Spectral Analysis 2023, Online, October 4–6, 2023.
36. Mini-course at the "Mini-courses in Mathematical Analysis", Padova, Italy, June 19–23, 2023.
35. Fourier analysis @200. International Centre for Mathematical Sciences (ICMS), Edinburgh, Scotland, June 27–July 1, 2022.
34. 11th International Conference on Harmonic Analysis and Partial Differential Equations. El Escorial, Spain, June 6–10, 2022.
33. Special Session on Harmonic Analysis, Fractal Geometry, and Applications at the Mathematical Congress of the Americas, Online, July 12–23, 2021.
32. Harmonic and Spectral Analysis 2021, Online, May 31–June 2, 2021.
31. Workshop on Euclidean Ramsey Theory, Online, Renyi Institute, Budapest, March 10–12, 2021.
30. Spaces of Analytic Functions: Approximation, Interpolation, Sampling. Centre de Recerca Matemàtica (CRM), Barcelona, Spain, November 25–29, 2019.
29. Harmonic Analysis and PDE. Holon, Israel, May 26–31, 2019.
28. One-Dimensional Complex Analysis and Operator Theory. The Euler International Mathematical Institute, St. Petersburg, Russia, May 13–17, 2019.
27. Action Now meeting. Technion, Haifa, Israel, April 29, 2019.
26. Israel Academy of Sciences and Humanities Symposium. Jerusalem, Israel, March 14, 2019.
25. Fourier Bases. Heraklion, Crete, Greece, September 19–21, 2018.
24. Frame Theory and Exponential Bases. ICERM, Providence, Rhode Island, USA, June 4–8, 2018.
23. Mini-course at the Workshop on Quasicrystals, Delone sets and Generalizations of Lattices. Ohalo Manor, Israel, March 11–16, 2018.
22. BCAM Meeting on Sampling, Uncertainty Principles, and Combinatorial Methods in Harmonic Analysis. Basque Center for Applied Mathematics (BCAM), Bilbao, Spain, January 15–17, 2018.
21. Workshop on Spectral Structures and Topological Methods in Mathematical Quasicrystals. Oberwolfach, Germany, October 1-7, 2017.
20. Computational Methods and Function Theory (CMFT) 2017. Lublin, Poland, July 10–15, 2017.

19. Joint Conference in Analysis of the Israel Mathematical Union and the Istituto Nazionale di Alta Matematica "F. Severi". Tel-Aviv, Israel, May 29–June 1, 2017.

18. Israel Mathematical Union annual meeting. Acre, Israel, May 25–28, 2017 (Erdős Prize Lecture).

17. Barcelona Analysis Conference 2016. Barcelona, Spain, September 5–9, 2016.

16. Second Workshop on Complex and Harmonic Analysis. Holon, Israel, April 13–15, 2016.

15. Fifth Workshop on Fourier Analysis and Related Fields. Budapest, Hungary, August 24–28, 2015.

14. Seventh International Conference on Complex Analysis and Dynamical Systems. Nahariya, Israel, May 10–15, 2015.

13. Conference on Function Spaces and Harmonic Analysis. Centre International de Rencontres Mathématiques (CIRM), Luminy, France, October 27-31, 2014.

12. Action Now, Special meeting devoted to Hermann Minkowski's 150th Birthday. Tel-Aviv, Israel, June 22, 2014.

11. Joint International Meeting of the Israel Mathematical Union and the American Mathematical Society. Tel-Aviv, Israel, June 16–19, 2014.

10. Workshop in Complex and Harmonic Analysis. Holon, Israel, June 11–13, 2014.

9. Conference in Probability, Ergodic Theory and Dynamical Systems. Tel-Aviv, Israel, April 9–11, 2014.

8. Sixth International Conference on Complex Analysis and Dynamical Systems. Nahariya, Israel, May 19–24, 2013.

7. Trondheim Spring School in Point Processes and Complex Analysis. Norwegian University of Science and Technology (NTNU), Trondheim, Norway, May 6–10, 2013.

6. Workshop on Hilbert spaces of entire functions and spectral theory of self-adjoint differential operators. Centre de Recerca Matemàtica (CRM), Barcelona, May 30–June 4, 2011.

5. Holon Workshop in Complex Analysis. Holon, Israel, April 14, 2011.

4. Workshop in Operator Theory and Harmonic Analysis. Oberwolfach, Germany, October 31–November 6, 2010.

3. Workshop on Recent Advances in Operator Theory and Function Theory. Fields Institute, University of Toronto, January 7–11, 2008.

2. Conference in Harmonic Analysis and Related Problems. Zaros, Crete, June 19–23, 2006.

1. Israel Mathematical Union meeting, Neve-Ilan, Israel, May 25–26, 2006.

Co-organization of Scientific Meetings

9. Analysis Session at the Annual Meeting of the Israel Mathematical Union, Weizmann Institute, Rehovot, Israel, September 8, 2024.

8. Analysis Session at the Annual Meeting of the Israel Mathematical Union, Weizmann Institute, Rehovot, Israel, September 3, 2023.

7. Harmonic and Complex Analysis: Modern and Classical, a conference dedicated to the memory of Lawrence Zalcman, Bar-Ilan University, Israel, June 18-23, 2023.

6. Fractals and Dynamics, a workshop honoring Boris Solomyak's 60th birthday, Bar-Ilan University, Israel, January 13-14, 2020.

5. Analysis Session at the Annual Meeting of the Israel Mathematical Union, Jerusalem, Israel, June 13, 2019.

4. Explorations in Harmonic Analysis and other realms, a conference honoring Alexander Olevskii's 80th birthday, Weizmann Institute, Rehovot, Israel, February 10–14, 2019.

3. Analysis Session at the Annual Meeting of the Israel Mathematical Union,
   Dead Sea, Israel, June 2-5, 2016.

2. Analysis Meeting held on the occasion of Shmuel Kantorovitz's 80'th birthday,
   Bar-Ilan University, Israel, October 14, 2015.

1. Integral Transforms and Spectral Theory Session in the Sixth International Conference on
   Complex Analysis and Dynamical Systems, Nahariya, Israel, May 19–24, 2013.

Students / Postdocs Supervised

2012-2015	Sigrid Grepstad (Ph.D). Joint supervision with Kristian Seip.
2014-2016	Rachel Greenfeld (M.Sc).
2016-2019	Rachel Greenfeld (Ph.D).
2017-2018	Bochen Liu (Postdoc).
2018-2020	Alberto Debernardi (Postdoc).
2019-2025	Gilad Reti (M.Sc).
2020-2025	Mark Etkind (M.Sc).
2023-2024	Anton Tselishchev (Postdoc).
2025-	Lukas Liehr (Postdoc).
2025-	Mark Etkind (Ph.D).

Languages

English, Hebrew	Fluent.
French, Spanish	Fair knowledge.

List of Publications

44. "Bounded remainder sets, bounded distance equivalent cut-and-project sets, and equidecomposability" (with M. Etkind, S. Grepstad, M. Kolountzakis).
    Submitted, `https://arxiv.org/abs/2511.21148`.

43. "The Turán and Delsarte problems and their duals" (with M. Kolountzakis, M. Matolcsi).
    Submitted, `https://arxiv.org/abs/2510.10172`.

42. "Completeness of sparse, almost integer and finite local complexity sequences of translates in $L^p(\mathbb{R})$" (with A. Tselishchev). Submitted, `https://arxiv.org/abs/2502.10041`.

41. "Maximality and completeness of orthogonal exponentials on the cube"
    (with M. Kolountzakis, M. Matolcsi). Part of a memorial issue in honour of Bent Fuglede.
    Expositiones Mathematicae. In press, `https://doi.org/10.1016/j.exmath.2025.125682`.

40. "Schauder frames of discrete translates in $L^p(\mathbb{R})$" (with A. Tselishchev).
    Revista Matemática Iberoamericana. In press, `https://doi.org/10.4171/rmi/1602`.

39. "Schauder frames of discrete translates in $L^2(\mathbb{R})$" (with A. Tselishchev).
    Journal of Functional Analysis **290** (2026), no. 7, Paper No. 111318, 15 pp.

38. "Geometric implications of weak tiling" (with M. Kolountzakis, M. Matolcsi).
    Part of a special issue on the 100th anniversary of Bent Fuglede's birthday.
    Analysis Mathematica **51** (2025), no. 4, 1375–1393.

37. "Unconditional Schauder frames of exponentials and of uniformly bounded functions in L^p spaces" (with A. Tselishchev). *International Mathematics Research Notices IMRN* 2025, no. 19, `rnaf299`.

36. "Completeness of uniformly discrete translates in $L^p(\mathbb{R})$".
Journal d'Analyse Mathématique **155** (2025), no. 1, 391–400.

35. "There are no unconditional Schauder frames of translates in $L^p(\mathbb{R})$, $1 \leqslant p \leqslant 2$"
(with A. Tselishchev). *Advances in Mathematics* **460** (2025), Paper No. 110036, 11 pp.

34. "Support of extremal doubly stochastic arrays" (with M. Etkind).
Israel Journal of Mathematics **267** (2025), no. 2, 685–715.

33. "Functions tiling simultaneously with two arithmetic progressions" (with M. Etkind).
Proceedings of the London Mathematical Society **127** (2023), no. 6, 1775–1815.

32. "Spectral sets and weak tiling" (with M. Kolountzakis, M. Matolcsi). Part of a special issue "The Fuglede conjecture and related problems in analysis and geometry".
Sampling Theory, Signal Processing, and Data Analysis **21** (2023), Paper No. 31, 21 pp.

31. "The Fuglede conjecture for convex domains is true in all dimensions" (with M. Matolcsi).
Acta Mathematica **228** (2022), no. 2, 385–420.

30. "Gabor orthonormal bases, tiling and periodicity" (with A. Debernardi).
Mathematische Annalen **384** (2022), no. 3–4, 1461–1467.

29. "Riesz bases of exponentials for convex polytopes with symmetric faces" (with A. Debernardi).
Journal of the European Mathematical Society JEMS **24** (2022), no. 8, 3017–3029.

28. "An example concerning Fourier analytic criteria for translational tiling".
Revista Matemática Iberoamericana **38** (2022), no. 6, 1975–1991.

27. "Tiling by translates of a function: results and open problems" (with M. Kolountzakis).
Discrete Analysis 2021, Paper No. 12, 24 pp.

26. "Spectrality of polytopes and equidecomposability by translations" (with B. Liu).
International Mathematics Research Notices IMRN 2021, no. 18, 13867–13891.

25. "Crystalline temperate distributions with uniformly discrete support and spectrum" (with G. Reti).
Journal of Functional Analysis **281** (2021), no. 4, Paper No. 109072, 15 pp.

24. "Poisson summation formulas involving the sum-of-squares function" (with G. Reti).
Israel Journal of Mathematics **246** (2021), no. 1, 403–421.

23. "Spectrality of product domains and Fuglede's conjecture for convex polytopes"
(with R. Greenfeld). *Journal d'Analyse Mathématique* **140** (2020), no. 2, 409–441.

22. "Multi-tiling and equidecomposability of polytopes by lattice translates" (with B. Liu).
Bulletin of the London Mathematical Society **51** (2019), no. 6, 1079–1098.

21. "Fourier frames for singular measures and pure type phenomena".
Proceedings of the American Mathematical Society **146** (2018), no. 7, 2883–2896.

20. "Riesz bases, Meyer's quasicrystals, and bounded remainder sets" (with S. Grepstad).
Transactions of the American Mathematical Society **370** (2018), no. 6, 4273–4298.

19. "Fuglede's spectral set conjecture for convex polytopes" (with R. Greenfeld).
Analysis & PDE **10** (2017), no. 6, 1497–1538.

18. "Fourier quasicrystals and discreteness of the diffraction spectrum" (with A. Olevskii).
    Advances in Mathematics **315** (2017), 1–26.

17. "Quasicrystals with discrete support and spectrum" (with A. Olevskii).
    Revista Matemática Iberoamericana **32** (2016), no. 4, 1341–1352.

16. "Spectrality and tiling by cylindric domains" (with R. Greenfeld).
    Journal of Functional Analysis **271** (2016), no. 10, 2808–2821.

15. "On non-periodic tilings of the real line by a function" (with M. Kolountzakis).
    International Mathematics Research Notices IMRN 2016, no. 15, 4588–4601.

14. "Equidistribution estimates for Fekete points on complex manifolds" (with J. Ortega-Cerdà).
    Journal of the European Mathematical Society JEMS **18** (2016), no. 2, 425–464.

13. "Quasicrystals and Poisson's summation formula" (with A. Olevskii).
    Inventiones mathematicae **200** (2015), no. 2, 585–606.

12. "Separating signal from noise" (with R. Peled, Y. Peres).
    Proceedings of the London Mathematical Society **110** (2015), no. 4, 883–931.

11. "Sets of bounded discrepancy for multi-dimensional irrational rotation" (with S. Grepstad).
    Geometric And Functional Analysis GAFA **25** (2015), no. 1, 87–133.

10. "Universal sampling, quasicrystals and bounded remainder sets" (with S. Grepstad).
    Comptes Rendus Mathématique **352** (2014), no. 7–8, 633–638.

9. "Multi-tiling and Riesz bases" (with S. Grepstad).
    Advances in Mathematics **252** (2014), 1–6.

8. "Algebraic functions in the Wiener algebra" (with A. Fehm, E. Paran).
    Communications in Algebra **42** (2014), no. 9, 3969–3979.

7. "Measures with uniformly discrete support and spectrum" (with A. Olevskii).
    Comptes Rendus Mathématique **351** (2013), no. 15–16, 613–617.

6. "Riesz bases of exponentials on multiband spectra".
    Proceedings of the American Mathematical Society **140** (2012), no. 9, 3127–3132.

5. "Exponential Riesz bases, discrepancy of irrational rotations and BMO" (with G. Kozma).
    Journal of Fourier Analysis and Applications **17** (2011), no. 5, 879–898.

4. "Uniqueness theorems for Fourier transforms".
    Bulletin des Sciences Mathématiques **135** (2011), no. 2, 134–140.

3. "Wiener's 'closure of translates' problem and Piatetski-Shapiro's uniqueness phenomenon"
    (with A. Olevskii). *Annals of Mathematics* **174** (2011), no. 1, 519–541.

2. "No characterization of generators in ℓ^p $(1 < p < 2)$ by zero set of Fourier transform"
    (with A. Olevskii). *Comptes Rendus Mathématique* **346** (2008), no. 11–12, 645–648.

1. "Piatetski-Shapiro phenomenon in the uniqueness problem" (with A. Olevskii).
    Comptes Rendus Mathématique **340** (2005), no. 11, 793–798.

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