

Aner Shalev – Short Bio

Hebrew Univ: Senior Lecturer (1992), Assoc. Professor (1993), Professor (1997), Vinik Chair in Mathematics (2010).

Oxford: Visiting Fellow at the Math. Institute (1989–1992), Junior Research Fellow at Wolfson College (1990–1992), Visiting Fellow at All Souls College (1996).

Univ. of Chicago: Visiting Assoc. Professor (Fall 1995).

London: Research Fellow at QMW (1991), Visiting Professor at Imperial College (2002/3).

Australian National Univ: Visiting Fellow (Fall 1992, Fall 1997).

Princeton: IAS Scholar (February 2006 and other visits).

Berkeley: Key senior scientist at MSRI Algebra program (Fall 1999 and January 2000), Member of the MSRI Group Representation Theory program (Spring 2018).

Grants, Awards: Amos de Shalit Award, Weizmann Inst. 1976. Yeshinsky Award for distinction of Ph.D. thesis (1988). Rothschild Fellowship (1989). Avi Fellowship (1990). Wingate Scholarship (1990). EPSRC Visiting Fellowship (UK, 1991 and 2002/3). Alon Fellowship (Hebrew Univ. 1992–1995). Leverhulme Fellowship (Oxford 1996). Bi-National Science Foundation United States–Israel Grants: 1993–1997, 1997–2000, 2001–2004, 2005–2009, 2009–2013, 2017–2021, Israel Science Foundation Grants: 1994–1997, 1997–2000, 2000–2003, 2004–2008, 2008–2012, 2013–2017, 2017–2021. ERC Advanced Grant: 2010–2014.

Selected Invited Addresses in Conferences

I was an invited speaker at about 70 international conferences, including: Summer School on Profinite Groups, under the auspices of Scuola Normale Superiore Pisa, 1991.

NATO Advanced Study Institute Meeting on Locally Finite Groups, Istanbul 1994 (giving a lecture-series).

AMS-IMU Conference, Jerusalem 1995.

5th St Andrews Group Theory Conference, Bath 1997 (Main speaker giving a lecture-series).

International Congress of Mathematicians, Berlin 1998 (Invited speaker).

British Mathematical Colloquium, 1999 (Principal speaker).

Lie Groups, Representations and Discrete Mathematics, Institute for Advanced Study, Princeton 2006.

Visitor and speaker in Scuola Normale Superiore (at Groups in Algebraic Geometry trimester), Pisa, 2008.

Profinite Groups Meeting, ESI, Vienna, 2008.
 Group Theory, Number Theory and Geometry, Oxford, 2009.
 Erdős Centennial Conference, Budapest, 2013.
 Words, symbolic dynamic and combinatorics of words in groups, Paris (ENS), 2015.
 Simple groups, representations and related topics (honoring Liebeck and Saxl), Cambridge, 2015.
 Joint London Math Society and European Math Society Anniversary Conference, Birmingham, 2015 (Plenary speaker).
 Finite simple groups: 30 years of the Atlas and beyond (honoring Conway), Princeton, 2015.
 Lecture tour in Croatia, organized by the Israel Ministry of Foreign Affairs, 2015.
 Representations of Finite and Algebraic Groups, MSRI, 2018.
 Groups, Geometry and Representations (honoring Dan Segal and Aner Shalev), Oxford, 2018.

Editorial work: I was/am an Editor in *J. Group Theory*, *Israel J. of Mathematics*, *J. of Algebra*, *Inter. J. of Algebra and Computation* and *Open Problems in Mathematics*.

Publication Record

I have 156 mathematical publications. SELECTED PUBLICATIONS:

A. Shalev, On the number of generators of ideals in local rings, *Adv. Math.* **59** (1986), 82–94.

A. Shalev, The structure of finite p -groups: effective proof of the coclass conjectures, *Invent. Math.* **115** (1994), 315–345.

M.W. Liebeck and A. Shalev, Classical groups, probabilistic methods, and the (2,3)-generation problem, *Annals of Math.* **144** (1996), 77–125.

A. Shalev, Simple groups, permutation groups, and probability, *Proc. International Congress of Mathematicians, Berlin, 1998*, Vol. II, Berlin, 1998, pp. 129–137.

M.W. Liebeck and A. Shalev, Permutation groups, simple groups, and probability, *J. Amer. Math. Soc.* **12** (1999), 497–520.

M.P.F. du Sautoy, D. Segal and A. Shalev (eds), *New horizons in pro- p groups*, Progress in Mathematics, Birkhäuser, 2000.

A. Shalev, Asymptotic group theory, *Notices of the Amer. Math. Soc.* Vol. **84**, Number 4, April 2001, 383–389.

M.W. Liebeck and A. Shalev, Diameters of finite simple groups: sharp bounds and applications, *Annals of Math.* **154** (2001), 383–406.

- E. Rozenman, A. Shalev and A. Wigderson, A new family of Cayley expanders(?), *STOC 2004*, 445–454.
- M.W. Liebeck and A. Shalev, Fuchsian groups, finite simple groups, and representation varieties, *Invent. Math.* **159** (2005), 317–367.
- M.W. Liebeck, B.M.S. Martin and A. Shalev, On conjugacy classes of maximal subgroups of finite simple groups, and a related zeta function, *Duke Math. Journal* **128** (2005), 541–557.
- M. Larsen and A. Shalev, Characters of symmetric groups: sharp bounds and applications, *Invent. Math.* **174** (2008), 645–687.
- M. Larsen and A. Shalev, Word maps and Waring type problems, *J. Amer. Math. Soc.* **22** (2009), 437–466.
- A. Shalev, Word maps, conjugacy classes, and a non-commutative Waring-type theorem, *Annals of Math.* **170** (2009), 1383–1416.
- M.W. Liebeck, E.A. O’Brien, A. Shalev and Ph. Tiep, The Ore Conjecture, *J. Europ. Math. Soc.* **12** (2010), 939–1008.
- M. Belolipetsky, T. Gelander, A. Lubotzky and A. Shalev, Counting arithmetic surfaces and 3-manifolds, *Annals of Math.* **172** (2010), 2197–2221.
- M. Larsen, A. Shalev and Ph. Tiep, The Waring problem for finite simple groups, *Annals of Math.* **174** (2011), 1885–1950.
- M.W. Liebeck, D. Segal and A. Shalev, The density of representation degrees, *J. Europ. Math. Soc.* **14** (2012), 1519–1537.
- T.C. Burness, M.W. Liebeck and A. Shalev, Generation and random generation: from simple groups to maximal subgroups, *Adv. Math.* **248** (2013), 59–95.
- M. Larsen and A. Shalev, A probabilistic Tits alternative and probabilistic identities, *Algebra and Number Theory* **10** (2016), 1359–1371.
- M. Larsen and A. Shalev, Words, Hausdorff dimension and randomly free groups, *Math. Ann.* **371** (2018), no. 3-4, 1409–1427.
- R.M. Guralnick, M.W. Liebeck, E.A. O’Brien, A. Shalev and Ph.H. Tiep, Surjective word maps and Burnside’s $p^a q^b$ theorem, *Invent. Math.* **213** (2018), no. 2, 589–695.
- R. Bezrukavnikov, M.W. Liebeck, A. Shalev and Ph. Tiep, Character bounds for finite groups of Lie type, *Acta Math.* **221**, no. 1 (2018), pp. 1–57.