

Levent Alpöge

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Born: April 1, 1992, Long Island, U.S.A.

Nationalities: U.S.A., Turkey.

Positions

2021-	Junior Fellow, Society of Fellows, Harvard University
2021-2022	NSF Postdoctoral Fellow, Harvard University
2020-2021	NSF Postdoctoral Fellow, Columbia University

Education

2020	PhD in Mathematics, Princeton University Thesis: <i>Points on Curves</i> Advisor: Manjul Bhargava
2016	MA in Mathematics, Princeton University
2015	MASt in Mathematics, University of Cambridge
2014	AM in Physics, Harvard University
2014	AB in Mathematics, Harvard University GPA: 4.0/4.0, <i>summa cum laude</i> with highest honours Senior thesis: <i>The average elliptic curve has few integral points</i> Advisor: Jacob Tsimerman

Awards

Harvard Junior Fellowship. NSF Postdoctoral Fellowship. 2015 Morgan Prize. Sophia Freund prize. Captain Jonathan Fay Prize. Thomas T. Hoopes Prize. Alex G. Booth '30 Fellow. Mumford Prize. Princeton Centennial Fellowship. NSF GRFP fellow. Churchill Scholar. Goldwater Scholar. Phi Beta Kappa. John Harvard Scholar (3x). Harvard University Certificate of Distinction in Teaching (5x). Detur Book¹ Prize. Finalist, Intel STS.

Publications & preprints

- L. Alpöge, *Un peu d'effectivité pour les variétés modulaires de Hilbert-Blumenthal*. (arXiv:2111.12466)
- L. Alpöge, *Quadrics in arithmetic statistics*. (arXiv:2110.03947)
- L. Alpöge, *Note on a theorem of Professor X*. (arXiv:2109.14328)
- L. Alpöge, *Modularity and effective Mordell I*. (arXiv:2109.07917)
- L. Alpöge, M. Bhargava, A. Shnidman, *A positive proportion of quartic fields are not monogenic yet have no local obstruction to being so*. (arXiv:2107.05514)
- L. Alpöge, M. Bhargava, A. Shnidman, *A positive proportion of cubic fields are not monogenic yet have no local obstruction to being so*. (arXiv:2011.01186)
- L. Alpöge, W. Ho *The second moment of the number of integral points on elliptic curves is bounded*. (arxiv:1807.03761)
- L. Alpöge, *The average number of rational points on genus two curves is bounded*. (arxiv:1804.05859)
- L. Alpöge, *Square-root cancellation for the signs of Latin squares*, *Combinatorica*. (arxiv:1412.7574)
- L. Alpöge, *The average number of integral points on elliptic curves is bounded*. (arxiv:1412.1047)
- L. Alpöge, *van der Waerden and the primes*, *Amer. Math. Monthly* 122 (2015), no. 8, 784--785.
- L. Alpöge, *Proof of a conjecture of Stanley-Zanello*, *J. Combin. Theory Ser. A* 125 (2014), 166--176. (arxiv:1308.2358)
- L. Alpöge, *Self-conjugate core partitions and modular forms*, *J. Number Theory* 140 (2014), 60--92. (arxiv:1307.0158)
- L. Alpöge, N. Amersi, G. Iyer, O. Lazarev, S. Miller, and L. Zhang, *Maass waveforms and low-lying zeroes*, in: C. Pomerance, M. Rassias (eds.), *Analytic Number Theory: in Honor of Helmut Maier's 60th Birthday*, 19--56, Springer, 2015. (arxiv:1306.5886).
- L. Alpöge, and S. Miller, *Low lying zeroes of Maass form L -functions*, *Int. Math. Res. Not. IMRN* 2015, no. 10, 2678--2701. (arxiv:1301.5702)
- L. Alpöge, T. Ang, L. Schaeffer, and J. Shallit, *Decidability and Shortest Strings in Formal Languages*, *Descriptional complexity of formal systems*, 55--67, *Lecture Notes in Comput. Sci.*, 6808, Springer, Heidelberg, 2011. (arxiv:1103.1622)
- L. Alpöge, A. Joshi, D. Scheinost, J. Onofrey, X. Qian, X. Papademetris, *A VTK-based, CUDA-optimized Non-Parametric Vessel Detection Method*, *The VTK Journal* (2010).

L. Alpöge, *Quadratic Reciprocity and Analytic Number Theory*, Harvard College Mathematics Review, volume 4. (Expository.)

Research visits

- “Reinventing Rational Points” program, April-July 2019, Institut Henri Poincaré, Paris, France. (Invited to give minicourse on “Arithmetic Statistics”.)

Seminar talks

- Number Theory Seminar, Columbia University, Zoom, 2021.
- Seminar, Princeton University, Zoom, 2021.
- Number Theory Seminar, The Ohio State University, Zoom, 2021.
- Number Theory Seminar, MIT, Cambridge, MA, 2021.
- Number Theory Seminar, Harvard University, Cambridge, MA, 2021.
- Explicit Methods in Number Theory, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Zoom, 2021.
- FGC-IPM Number Theory Seminar, Boğaziçi University, Zoom, 2021.
- Workshop on Arithmetic Statistics Problems, Max Planck Institute for Mathematics, Zoom, 2021.
- Ramanujan-Serre Seminar, University of Virginia, Zoom, 2021.
- Number Theory Seminar, Columbia University, Zoom, 2021.
- Algebra Research Seminar, Groningen, Zoom, 2021. (Two talks.)
- Diophantine Problems Seminar, MSRI, Zoom, 2020.
- Number Theory Seminar, Princeton University, Zoom, 2020.
- MAGIC Seminar, Michigan/Columbia, Zoom, 2020.
- Joint Mathematics Meetings, Denver, CO, 2020.
- Mathematics Seminar, Koç University, İstanbul, Turkey, 2019.
- Rational Points 2019, Universität Bayreuth, Schney, Germany, 2019.
- Number Theory Seminar, Duke University, Durham, NC, 2019.

- Tokyo-Princeton Workshop on Arithmetic Geometry, University of Tokyo, Tokyo, Japan, 2019.
- Number Theory Seminar, University of Chicago, Chicago, IL, 2019.
- Number Theory Seminar, Northwestern University, Evanston, IL, 2019.
- Joint Mathematics Meetings, Baltimore, MD 2019. (Two talks.)
- Group, Lie, and Number Theory Seminar, University of Michigan, Ann Arbor, MI, 2018.
- Explicit Methods in Number Theory, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany, 2018.
- Joint Mathematics Meetings, San Diego, CA, 2018.
- CMS Winter Meeting, University of Waterloo, Waterloo, Canada, 2017.
- Rational Points 2017, Universität Bayreuth, Schney, Germany, 2017.
- Department Colloquium, Michigan Tech, Houghton, MI, 2016.
- Joint Mathematics Meetings, Seattle, WA, 2016.
- Rational Points 2015, Universität Bayreuth, Schney, Germany, 2015.
- Cambridge Number Theory Seminar, University of Cambridge, Cambridge, UK, 2015.
- Heilbronn (number theory) Seminar, Bristol University, Bristol, UK, 2015.
- Boğaziçi University Mathematics Society Seminar, Boğaziçi University, İstanbul, Turkey, 2015.
- Turkish Mathematical Society Seminar, Sabancı University, İstanbul, Turkey, 2015.
- London Number Theory Seminar, University College London, London, UK, 2015.
- Warwick Number Theory Seminar, University of Warwick, Coventry, UK, 2015.
- Joint Mathematics Meetings, San Antonio, TX, 2015.
- Center for Communications Research, Princeton, NJ, 2014.
- Joint Mathematics Meetings, Baltimore Convention Center, Baltimore, MD, 2014.
- Joint Mathematics Meetings, San Diego Convention Center, San Diego, CA, 2013.
- Québec-Maine Number Theory Conference, Université Laval, Québec, Canada, 2012.
- Young Mathematicians Conference, The Ohio State University, Columbus, OH, 2011.

Teaching

2011-2014 *Course Assistant*
Harvard University Mathematics Department
Taught section/graded problem sets for: Math 55a/b (2x), 122, 129.
5x winner of Certificate of Distinction in Teaching.

Service

2012-2014 *Teacher* (8-10 year-olds)
The Math Circle, Harvard University

2015-2018 *Advisor*
Duluth REU, University of Minnesota Duluth

2016-2017 *Co-Organizer*
Graduate Student Seminar, Princeton University

2017-2019 *Organizer*
Informal Analytic Number Theory Seminar, Princeton University

¹Book chosen for sealing: *Radyo, Televizyon, Radar: ilkeler ve uygulama*, Oğuz Alpöge.