GIORGIS PETRIDIS

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EMPLOYMENT

Assistant Professor, The University of Georgia in Athens, 2016 - present.

Visiting Assistant Professor, University of Rochester, 2012 - 2016.

EDUCATION

Doctor of Philosophy under the supervision of W.T. Gowers, University of Cambridge, 2002 - 2011.

Certificate of Advanced Studies in Mathematics, St John's College, University of Cambridge, 2001 - 2002.

BA (Hons) in Mathematics, St John's College, University of Cambridge, 1998 - 2001.

GRANTS

NSF DMS Award 1723016 & Award 1500984, 2015 - 2019 (standard grant, one is continuation of the other).

NSF DMS Award 1804049, 2018 (conference grant for the Georgia Discrete Analysis conference).

AMS-Simons Travel Grant, 2013 - 2015.

SELECTED PUBLICATIONS

[1] B. Lund and G. Petridis *Bisectors and pinned distances*, Submitted, arXiv:1810.00765, 2018.

[2] B. Murphy, G. Petridis, O. Roche-Newton, M. Rudnev and I. D. Shkredov, *New results on sum-product type growth over fields*, To appear in Mathematika, arXiv:1702.01003, 2017.

[3] G. Petridis and I. E. Shparlinski, *Bounds on trilinear and quadrilinear exponential sums*, To appear in J. Anal. Math., arXiv:1604.08469, 2016.

[4] B. Murphy and G. Petridis *Products of differences over arbitrary finite fields*, Discrete Analysis, 2018:18, 2018.

[5] C. Aten et all, *Tiling sets and spectral sets over finite fields*, J. Funct. Anal., 273 (8), 2547–2577, 2017.

[6] G. Petridis, *Upper bounds on the cardinality of higher sumsets*, Acta Arith. 158 (4), 299–319, 2013.

[7] G. Petridis, *The L^1-norm of exponential sums in $\mathbb{Z}^d$*, Math. Proc. Cambridge Philos. Soc. 154 (3), 381–391, 2013.

[8] G. Perarnau and G. Petridis, *Matchings in random biregular bipartite graphs*, Electron. J. Combin. 20 (1), P60, 2013.

[9] G. Petridis, *New proofs of Plünnecke-type estimates for product sets in groups*, Combinatorica 32 (6), 721–733, 2012.

[10] G. Petridis, *Plünnecke's inequality*, Combin. Probab. Comput. 20 (6), 921–938, 2011.

INVITED SPEAKER FOR WORKSHOPS

Pseudo-Randomness and Finite Fields worksop, Johann Radon Institute for Computational and Applied Mathematics (RICAM), Linz, Austria, October 2018.

Additive Combinatorics, Entropy, and Fractal Geometry Arbeitsgemeinschaften, Mathematisches Forschungsinstitut, Oberwolfach, Germany, 8 Oct - 13 Oct 2017.

Week-long Block Course in Additive Combinatorics, Freie Universität Berlin, Germany, October 2014.

Series of four talks at the New York Number Theory Seminar, CUNY Graduate Center, NY, USA, May 2011.

SELECTED INVITED TALKS AND VISITS

Stanford University, Number Theory seminar, CA, USA, January 2019.

The Ohio State University, Combinatorics and Probability seminar, Columbus, OH, USA, November 2018.

19th Atlanta Lecture Series in Graph Theory and Combinatorics, Georgia State University, Atlanta, GA, USA, April 2017.

Universidad Autónoma de Madrid, Seminar, Madrid, Spain, December 2016.

Georgia Institute of Technology, Seminar, Atlanta, GA, USA, November 2016.

MIT, Seminar and visit to Larry Guth's group, Cambridge, MA, USA, October 2015.

Oakridge National Laboratory, Division of Mathematics Seminar, TN, USA, September 2015.

McGill University, Combinatorics Seminar, Montreál, Canada, March 2014.

Fields Institute, Number Theory Seminar, Toronto, Canada, September 2013.

University of Athens, Mathematical Analysis Seminar, Athens, Greece, January 2012.

Universitat Politècnica de Catalunya, Combinatorics Graph Theory and Applications Seminar, Barcelona, Spain December 2011. Invited researcher at UPC: December 2011, May 2012.

Newton Institute, Discrete Analysis Seminar, Cambridge, UK, February 2011.

TEACHING EXPERIENCE

Lectured the following courses at the University of Georgia in Athens (2016 - present):

- *2000-Level*: Honors Calculus II, Elementary Differential Equations.
- *3000-Level*: Applied Linear Algebra.
- *Graduate*: Combinatorial Number Theory, Vertical Research Group on Arithmetic Combinatorics.

Lectured the following courses at the University of Rochester (2012 - 2016):

- *100-Level*: Calculus I, Calculus IA, Discrete Mathematics, Multidimensional Calculus, Linear Algebra with Differential Equations.
- *200-Level*: Introduction to Probability, Linear Algebra, Introduction to Algebra I, Combinatorics, Logic & Set Theory.

Supervised most first and second year courses at at the University of Cambridge (2002 - 2009) and gave Examples Classes for St John's College, University of Cambridge (2004 - 2007).

STUDENT MENTORING

REU	Monte Fischer: lead REU in collaboration with Neil Lyall on 'Additive energy on the discrete cube', 2017.
	'Tiling sets and spectral sets over finite fields' REU with the participation of 14 students in collaboration with A. Iosevich and J. Pakianathan. Resulted in [?], 2015.
	Mentor for summer McNair program (which aims to increase graduate degree awards for students from underrepresented segments of society), 2015.
	Lead REU on random regular graphs, 2014.
	Contributed to A. Iosevich's REU on the Erdős distinct distance problem, 2014.
Advising	Four independent study projects on cryptography, combinatorial game theory, educational aspects of mathematics, and Rubik's cube.

SERVICE

Georgia Discrete Analysis Conference: with E. Croot, N. Lyall and A. Magyar at the University of Georgia in Athens, May 2018 – NSF DMS Award 1804049.

Outreach: Multiple talks to the Rochester Area Math Circle, to high school students visiting the University of Rochester, and to the University of Rochester S.U.M.S. undergraduate mathematics society.

Public understanding of science: Helped edit science communication guides for the general public, one on medical screening and one on statistics.