

## 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 - 2020 (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] G. Petridis, O. Roche-Newton, M. Rudnev and A. Warren *An energy bound in the affine group*, Submitted, [arXiv:1911.03401](https://arxiv.org/abs/1911.03401), 2019.
- [2] B. Hanson and G. Petridis *Refined estimates concerning sumsets contained in the roots of unity*, Accepted in Proc. Lond. Math. Soc.(3), [arXiv:1905.09134](https://arxiv.org/abs/1905.09134), 2019.
- [3] B. Lund and G. Petridis *Bisectors and pinned distances*, Accepted in Discrete Comput. Geom., [arXiv:1810.00765](https://arxiv.org/abs/1810.00765), 2018.
- [4] G. Petridis and I. E. Shparlinski, *Bounds on trilinear and quadrilinear exponential sums*, J. Anal. Math. 138 (2), 613–641, 2019.
- [5] B. Murphy, G. Petridis, O. Roche-Newton, M. Rudnev and I. D. Shkredov, *New results on sum-product type growth over fields*, Mathematika 65(3), 588–642, 2019.
- [6] B. Murphy and G. Petridis *Products of differences over arbitrary finite fields*, Discrete Analysis, 2018:18, 42 pp., 2018.
- [7] C. Aten et al, *Tiling sets and spectral sets over finite fields*, J. Funct. Anal., 273 (8), 2547–2577, 2017.
- [8] G. Petridis, *Upper bounds on the cardinality of higher sumsets*, Acta Arith. 158 (4), 299–319, 2013.

- [9] G. Petridis, *The  $L^1$ -norm of exponential sums in  $\mathbb{Z}^d$* , Math. Proc. Cambridge Philos. Soc. 154 (3), 381–391, 2013.
- [10] G. Perarnau and G. Petridis, *Matchings in random biregular bipartite graphs*, Electron. J. Combin. 20 (1), P60, 2013.
- [11] G. Petridis, *New proofs of Plünnecke-type estimates for product sets in groups*, Combinatorica 32 (6), 721–733, 2012.
- [12] G. Petridis, *Plünnecke’s inequality*, Combin. Probab. Comput. 20 (6), 921–938, 2011.

## INVITED SPEAKER FOR WORKSHOPS

Additive Combinatorics in Marseille 2020, Centre International de Rencontres Mathématiques (CIRM), Marseille, France September 2020.

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

Speaker at the NSF-CBMS Conference on Additive Combinatorics from a Geometric Viewpoint, University of South Carolina, Columbia, SC USA, May 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

Université of Montréal, Quebec-Vermont Number Theory Seminar, Montréal, Canada, April 2020.

Universidade NOVA de Lisboa Algebra and Logic seminar, Lisbon, Portugal, June 2019

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, Montréal, 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.
- *4000-Level*: Combinatorics, Graph Theory.
- *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

Supervised Masters Thesis on 'Extremal combinatorics on set systems', 2020.

Co-lead REU in collaboration with Neil Lyall on 'Additive energy on the discrete cube' and guided preparation on a public talk on 'Investigating Additive Combinatorics Through Freiman's Theorem and Plünnecke's Inequality', 2017.

Co-lead REU with A. Iosevich and J. Pakianathan on 'Tiling sets and spectral sets over finite fields' with the participation of 14 students. Resulted in [7], 2015.

Mentor for summer McNair program (which aims to increase graduate degree awards for students from underrepresented segments of society), 2015.

## 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**: Directed week-long group activities for high school students on Combinatorial Geometry at the UGA 2018 Math Camp, July 9–13 2018.

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