Petru Constantinescu

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Research Interests

Analytic Number Theory, Automorphic Forms and their Spectral Theory, Additive Combinatorics

Education

2017–present	**PhD Mathematics**, *University College London*, supervised by Yiannis Petridis.
2016–2017	**MASt in Mathematics (Part III)**, *University of Cambridge*. Distinction (85%)
2013–2016	**BSc Mathematics**, *Imperial College London*. First Degree Honours, Ranked 3rd in my year (91.4 %)

Publications and Preprints

2020	*Residual equidistribution of modular symbols and cohomology classes for quotients of hyperbolic n-space*, with A.C. Nordentoft, arXiv:2010.12403
2020	*Distribution of modular symbols in $\mathbb{H}^3$*, accepted to **IMRN**, arXiv:2005.07629

Scholarships and Awards

2017–2021	**EPSRC PhD Studentship**, *London School of Geometry and Number Theory*.
2020	**Davenport Prize in Pure Mathematics**, *University College London*.
2017	**Santander Master's Prize**, *University of Cambridge*. Academic excellence in Part III
2016	**IBM Prize for excellence in Pure Mathematics**, *Imperial College London*. Awarded to one final year student
2015	**Gloucester Research LtD Prize**, *Imperial College London*.
2015	**Winton Capital Management Prize in Mathematics**, *Imperial College London*. Best 2nd year group project
2015	**UROP Prize**, *Imperial College London*. Best summer research project
2013	Prize for the best student in my year at the Romanian Mathematical Olympiad
2010,2011,2013	Gold medal at the Romanian National Mathematical Olympiad

Projects

2017-2018	LSGNT First Year Projects ○ *Large Gaps between Primes*, supervised by Andrew Granville ○ *The Gauss Circle Problem*, supervised by Igor Wigman
2017	Part III Essay, Cambridge ○ *The Erdős Distinct Distances Problem*, supervised by Timothy Gowers
2015	Summer Undergraduate Project, Imperial College London

○ *Additive structure of integers*, supervised by Martin Liebeck

Seminars Organised

2019-2020   London Analytic Number Theory Study Group

Selected Talks

Nov 2020   *Distribution of modular symbols*, The London-Paris Number Theory Seminar

Nov 2020   *Distribution of modular symbols*, London Mathematical Society's Virtual Graduate Student Meeting

Feb 2020   *Quantum unique ergodicity for holomorphic cusp forms*, London Analytic Number Theory Study Group

Jan 2020   *Spectral Theory of Automorphic Forms*, UCL Postgrad Seminar

Nov 2019   *Distribution of modular symbols*, London Analytic Number Theory Study Group

Oct 2019   *Distribution results for modular symbols*, London Junior Number Theory Seminar

May 2019   *Matomaki and Radziwill theorem for the Liouville function*, London Analytic Number Theory Study Group

March 2019   *Duke's Equidistribution Theorem*, London Analytic Number Theory Study Group

Nov 2018   *Prime Geodesic Theorem*, London Analytic Number Theory Study Group

Oct 2018   *The Selberg Trace Formula*, London Junior Number Theory Seminar

May 2018   *Gauss Circle Problem*, London Analytic Number Theory Study Group

May 2018   *Number Theory in Function Fields*, London Analytic Number Theory Reading Group

Jan 2018   *Conditional Upper Bounds on Zeta*, London Analytic Number Theory Study Group

Jan 2018   *Probabilistic Number Theory*, London Analytic Number Theory Reading Group

Nov 2017   *Erdös distinct distances problem*, London Analytic Number Theory Study Group

Nov 2017   *The Circle Method*, London Analytic Number Theory Reading Group

Jan 2017   *The (surprising) equivalence of three theorems in Combinatorics*, Part III Seminars in Cambridge

Mar 2016   *Additive Structures on Integers*, Imperial Undergraduate Mathematics Colloquium

Feb 2016   *Geometry of Numbers*, Imperial Undergraduate Mathematics Colloquium

Nov 2015   *Crystals and Symmetry*, Imperial Undergraduate Mathematics Colloquium

Teaching Experience

2017-2020   Organised problem solving classes and prepared the UCL team for the International Mathematics Competition

Summer 2018   Instructor at AwesomeMath Summer Program, University of Puget Sound

Summer 2017   Instructor at AwesomeMath Summer Program, Cornell University and San Jose State University

Summer 2016   Instructor at AwesomeMath Summer Program, Cornell University

Summer 2015   Teaching Assistant at AwesomeMath Summer Program, UC Berkeley

2014-2016   Tutoring volunteer as part of Imperial College Outreach Programme

Conferences/Workshops attended

Jun 2020   Online Conference in Automorphic Forms

Dec 2019   Zeta Functions, Marseille, France

Sep 2019   Warwick-Oxbridge-Manchester-Bristol-London (WOMBL) 1-day meeting, Oxford, UK

Jul 2019   Second Symposium on Analytic Number Theory, Cetraro, Italy

Jun 2019   Arithmetic, geometry, and modular forms: a conference in honour of Bill Duke, Zurich, Switzerland

Apr 2019   Analytic Aspects of Automorphic Forms, Lille, France

Jan 2019	Trace functions and their applications, Monte Verita, Switzerland
Nov 2018	The London-Paris Number Theory Seminar, Paris, France
Nov 2018	Young Researchers in Algebraic Number Theory (Y-RANT), Sheffield, UK
Oct 2018	Srinivasa Ramanujan: in celebration of the centenary of his election as FRS, London, UK
Sep 2018	Arithmetic Ramsey Theory, Manchester, UK
Sep 2018	Elementare und Analytische Zahlentheorie (ELAZ), Bonn, Germany
Jul 2018	Building Bridges: 4th EU/US Summer School + Workshop on Automorphic Forms and Related Topics, Budapest, Hungary

Skills

Languages	English (**Fluent**), Romanian (**Native**), French (**Basic**)
IT	Mathematica, Matlab, Python