

# Curriculum Vitae

## Dimitrios Chatzakos

### Personal Details

Date of birth: May 30th, 1988  
Place of birth: Athens, Greece  
Citizenship: Greek  
Family status: Married, one child

### Contact Information

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### Research Interests

Automorphic forms, Analytic number theory,  $L$ -functions, Arithmetic quantum chaos, Spectral theory, Harmonic analysis

### Research positions

From 10/2019      Postdoctoral fellow, IdEx Université de Bordeaux  
10/2017 – now      Postdoctoral fellow, CEMPI, Lille and Université de Lille  
04/2017 – 07/2017      Research visitor, Department of Mathematics, King's College London  
10/2016 – 03/2017      Research visitor, School of Mathematics, University of Bristol

### Short Reserach visits

1. Mathematical Institute, Utrecht University, 12th – 14th June 2019
2. Alfréd Rényi Institue of Mathematics, Budapest, 2nd – 7th March 2019
3. School of Mathematics, University of Bristol, 14th – 17th November 2017

## Education

- 09/2012 – 10/2016 PhD Mathematics, University College of London, UK  
*Dissertation advisor:* Yiannis Petridis  
*PhD Thesis:* “Lattice point problems in the hyperbolic plane.”
- 10/2010 – 09/2012 MSc Mathematics (with distinction), University of Athens, Greece  
*Thesis advisor:* Aristides Kontogeorgis  
*Thesis:* “Modular forms and Elliptic curves.”
- 09/2006 – 10/2010 BSc Mathematics (with distinction), University of Athens, Greece

## List of publications

1. *The hyperbolic lattice point problem in conjugacy classes.* (with Y. Petridis), Forum Math. 28 (2016), no. 5, 981–1003. (arXiv:1504.01307)
2.  *$\Omega$ -results for the hyperbolic lattice point problem.* Proc. Amer. Math. Soc., vol. 145 (2017), no. 4, 1421–1437. (arXiv:1512.04137)
3. *Mean-value and  $\Omega$ -results for the hyperbolic lattice point problem in conjugacy classes.* (to appear in Revista Matemática Iberoamericana, arXiv:1610.01462)
4. *Prime Geodesic Theorem in the 3-dimensional hyperbolic space.* (with O. Balkanova, G. Cherubini, D. Frolenkov and N. Laaksonen, to appear in Transactions of the American Mathematical Society, arXiv:1712.00880)
5. *CM-points and lattice counting on arithmetic compact Riemann surfaces.* (with M. Alsina, submitted for publication, arXiv:1808.01318)
6. *Second Moment of the Prime Geodesic Theorem for  $PSL(2, Z[i])$ .* (with G. Cherubini and N. Laaksonen, submitted for publication, arXiv:1812.11916)

## Honours and Awards

1. LMS 150th Anniversary Postdoctoral Mobility Grants 2016 – 2017 (Six months visit to University of Bristol)
2. Best talk Award, LMS Graduate Meeting, November 2015
3. Davenport Prize in Pure Mathematics, UCL, 2013
4. EPSRC DTA Scholarship, 2012 – 2016
5. Scholarship of Lilian Voudouri Foundation, 2011 – 2012
6. International Mathematics Competition 2010, Third Prize
7. Southern Eastern Mathematical Olympiad for University Students 2008, Bronze Medal

## Teaching experience

1. University College of London:  
Problem solving seminar, Preparation Seminar for the SEEMOUS 2016 and IMC 2016  
Math 3703 Prime numbers and their distribution (Problem Class), First term 2015–16  
Math 3703 Prime numbers and their distribution (Problem Class), First term 2014–15
2. University of Athens:  
Math 201 Calculus 2, Teaching assistance, Winter term 2011–12  
Math 101 Calculus 1, Teaching assistance, Winter term 2010–11

## Marking experience

1. University College of London:  
Math 1102 Calculus 2, Second term 2015–16  
Math 1102 Calculus 2, Second term 2014–15  
Math 2101 Complex Analysis, First term 2014–15  
Math 3103 Functional Analysis, Second term 2013–14  
Math 3101 Measure Theory, First term 2013–14

## Conference and Workshop talks

1. “*Spectral theory of automorphic forms on the 3-dimensional hyperbolic space*”, First Congress of Greek Mathematicians, Athens, Greece, 25th – 30th June 2018
2. “*The Prime Geodesic Theorem in the 3-dimensional hyperbolic space*”, 16th Panhellenic Conference on Analysis, Karlovassi, Samos, Greece, 25th – 27th May 2018
3. “*The Prime Geodesic Theorem in the 3-dimensional hyperbolic space*”, The fourth mini symposium of the Roman Number Theory Association, Rome, 19th – 20th April 2018
4. “*Prime Geodesic Theorem in the 3-dimensional hyperbolic space*”, Arithmétique en Plat Pays: Journée Automnale Louvain-la-Neuve, 22nd meeting, 11th December 2017
5. “*Lattice counting problems in the hyperbolic plane*”, Workshop on Spectral Theory, Automorphic Forms and Arithmetic, Copenhagen, 14th – 18th November 2016
6. “*Automorphic forms for  $SL(2, R)$  and lattice counting problems*”, 2nd Nisyros Conference on automorphic representations and related topics, Nisyros, 13th – 18th June 2016
7. “*Harmonic analysis in the hyperbolic plane and lattice counting in conjugacy classes*”, 15th Panhellenic Conference of Mathematical Analysis, University of Crete, 27th – 29th May, 2016
8. “*The Gauss circle problem in the hyperbolic plane*”, Graduate Student Meeting of London Mathematical Society, London, 13th November 2015 (awarded as the best talk of the meeting)
9. “*Spectral theory in hyperbolic spaces and counting in discrete subgroups of  $SL(2, R)$* ”, Workshop on Analysis, Athens, 6th – 10th July 2015
10. “*Hyperbolic lattice point problems*”, Taught Course Centre Event Day in Number Theory, Imperial College London, 13th April 2015

11. “*The hyperbolic lattice point problem in conjugacy classes*”, Building Bridges: 2nd EU/US Summer School + Workshop on Automorphic Forms and Related Topics, 30th June – 11th July 2014

### Seminar talks

1. “*Quantum unique ergodicity on arithmetic hyperbolic manifolds*”, Seminar of number theory, Department of Mathematics, Utrecht University, 14th June 2019
2. “*Quantum ergodicity in shrinking balls of arithmetic hyperbolic manifolds*”, Seminar of number theory, Renyi Institute, 5th March 2019
3. “*The Prime Geodesic Theorem in the 3-dimensional hyperbolic space*”, Séminaire Arithmétique, Université de Lille 1, 30th November 2017
4. “*The Lindelöf hypothesis*”, ‘My favourite conjecture’ number theory study group, King’s College London, 14th June 2017
5. “*The analytic large sieve*”, Study group on ‘Sieve theory’, King’s College London, 24th May 2017
6. “*Hyperbolic lattice point counting in conjugacy classes*”, Linfoot seminar, School of Mathematics, Bristol, 23rd November 2016
7. “*Hyperbolic lattice point counting in conjugacy classes*”, Oberseminar Algebra, Ulm Universität, 10th November 2016
8. “*Lattice counting problems in the hyperbolic plane*”, AG-Seminar Algebra, TU Darmstadt, 8th November 2016
9. “*Hyperbolic lattice point counting in conjugacy classes*”, Geometry and Algebra, Geometry and Analysis seminar, Department of Mathematics, Utrecht University, 22nd March, 2016
10. “*Hyperbolic lattice point counting in conjugacy classes*”, Algebra, geometry and number theory seminar, Mathematical Institute, Universiteit Leiden, 21st March, 2016
11. “*Lattice point problems in the hyperbolic plane*”, Analytic Number Theory Seminar, UCL, 25th November 2015
12. “*What kind of arithmetic objects live on the hyperbolic plane? (or, how to explain Prime Number Theorem to a geometer)*”, Postgraduate Seminar, University College of London, 4th December 2014
13. “*The hyperbolic lattice point problem in conjugacy classes*”, Analysis Seminar, University of Copenhagen, 28th March 2014
14. “*From Diophantine equations to Hyperbolic geometry*”, Postgraduate Seminar, University College of London, 6th February 2014
15. “*The hyperbolic lattice point problem in conjugacy classes*”, Postgraduate Seminar, University College of London, 17th October 2013

16. “*Sums of Kloosterman sums*”, Number Theory Seminar, University of Athens, 18th December 2012

### **Conferences, Workshops and Summer schools attended**

1. Arithmetic, geometry, and modular forms: a conference in honour of Bill Duke, Zurich, ETH, 17th – 21st June 2019
2. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 3rd June 2019
3. Analytic Aspects of Automorphic Forms, Lille, 3rd – 5th April, 2019
4. Crosscurrents in number theory, analysis and geometry, Paris, 21st – 22nd March 2019
5. Arithmétique en Plat Pays : Journée Hivernale Lille, 11th March 2019
6. Workshop and Winter School on Local Statistics of Point Sequences, 25th February – 1st March 2019, University of Linz, Austria
7. Integrable systems and automorphic forms, Lille, Laboratoire Paul Painlevé, 19th – 22nd February 2019
8. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 14th January 2019
9. Arithmétique en Plat Pays: Journée automnale, Antwerp, 10th December 2018
10. Arithmétique en Plat Pays: Journée printanière, Lille, 18th June 2018
11. Perspectives on the Riemann Hypothesis, Bristol, 4th – 7th June 2018
12. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 19th March 2018
13. Tenth meeting of the GDR Quantum Dynamics, Lille, 21st – 23rd February 2018
14. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 5th February 2018
15. Mathematical Analysis in Athens – Katavolos and Nestoridis, Athens, 15th – 19th December 2017
16. London-Paris Number Theory Seminar, 23rd Meeting, Paris, 27th – 28th November 2017
17. 3rd Japanese-German Number Theory Workshop, Max Planck Institute for Mathematics, Bonn, 20th – 24th November 2017
18. 30th Journée arithmétique, Caen, 4th – 8th July 2017
19. London-Paris Number Theory Seminar, 22nd Meeting, London, 5th – 6th June 2017
20. Fonctions Zeta Franco-Japonaises, Lille, 13th-17th March 2017

21. Random Waves in London Workshop, King's College London, 3rd – 5th May 2016
22. Intercity Number Theory Seminar, Leiden, 24th March 2016
23.  $L$ -functions and Automorphic Forms, Heidelberg, 22nd – 26th February 2016
24. London-Paris Number Theory Seminar, 19th Meeting, Paris, 8th – 9th November 2015
25. 1st Nisyros Conference on Automorphic Representations and Related Topics, Nisyros, 12th – 17th July 2015
26. Summer School on Operator Theory and Applications and Workshop on Analysis, Athens, 6th–10th July 2015
27. London-Paris Number Theory Seminar, 18th meeting, London, 4th – 5th June 2015
28. Analytic aspects of number theory, ETH Zürich, 18th – 22nd May 2015
29. Taught Course Centre Event Day in Number Theory, Imperial College London, 13th April 2015
30. The Joint British Mathematical Colloquium and British Applied Mathematics Colloquium, Cambridge, 30th March – 2nd April 2015
31. Analytic Number Theory Workshop, Oxford, 29th September – 3rd October 2014
32. Bounded Gaps between Primes, LMS – CMI Research School, Oxford, 22nd – 26th September 2014
33. Building Bridges: 2nd EU/US Summer School + Workshop on Automorphic Forms and Related Topics, Bristol, 30th June – 11th July 2014
34. London-Paris Number Theory Seminar, 16th meeting, London, 9th June 2014
35. British Mathematical Colloquium, London, 4th – 9th April 2014
36. Young Researchers in Mathematics 2013, Edinburgh, 17th – 20th June 2013
37. London-Paris Number Theory Seminar, 14th meeting, London, 3rd – 4th June 2013
38. Taught Course Centre Graduate Event Day on Number Theory, Bristol, 21st May 2013

### **Study groups**

1. 'Additive Number theory', Université de Lille, February 2019 – now
2. 'Quantum ergodicity on thin sets', Université de Lille, October 2018 – December 2018
3. 'On Geometric invariants for real quadratic fields', Université de Lille, October 2017 – June 2018
4. 'Sieve theory', King's College London, April 2017 – June 2017

**Organizational activities**

1. Analytic aspects of automorphic forms, Lille, 3rd – 5th April 2019

**Community service**

Reviewer for Zentralblatt MATH

**Languages**

English (fluent), Greek (native), French (basic)