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

10/2019 – now   Postdoctoral fellow, IdEx Université de Bordeaux

10/2017 – 09/2019   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. *On the distribution of lattice points on hyperbolic circles.* (with Pär Kurlberg, Stephen Lester and Igor Wigman, submitted for publication, arXiv:2009.10546)

2. *Quantum ergodicity in shrinking balls of arithmetic hyperbolic manifolds.* (with R. Frot and N. Raulf, submitted for publication, arXiv:2007.11473)

3. *Second Moment of the Prime Geodesic Theorem for $PSL(2, Z[i])$.* (with G. Cherubini and N. Laaksonen, submitted for publication, arXiv:1812.11916)

4. *CM-points and lattice counting on arithmetic compact Riemann surfaces.* (with M. Alsina), J. Number Theory 212, 2020, 339–353. (arXiv:1808.01318)

5. *Prime Geodesic Theorem in the 3-dimensional hyperbolic space.* (with O. Balkanova, G. Cherubini, D. Frolenkov and N. Laaksonen), Trans. Amer. Math. Soc. 372 (2019), no. 8, 5355–5374. (arXiv:1712.00880)

6. *Mean-value and Ω-results for the hyperbolic lattice point problem in conjugacy classes.* Rev. Mat. Iberoam. 35 (2019), no. 4, 1123–1152. (arXiv:1610.01462)

7. *Ω-results for the hyperbolic lattice point problem.* Proc. Amer. Math. Soc., vol. 145 (2017), no. 4, 1421–1437. (arXiv:1512.04137)

8. *The hyperbolic lattice point problem in conjugacy classes.* (with Y. Petridis), Forum Math. 28 (2016), no. 5, 981–1003. (arXiv:1504.01307)

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. Université de Bordeaux:
   Spectral theory of automorphic forms and related problems, Special training course for
   postgraduate students, Second term 2019–20

2. University College of London:
   Problem solving seminar, Preparation Seminar for the SEEMOUS 2016 and IMC 2016,
   First and Second terms 2015–16
   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

3. University of Athens:
   Math 201   Calculus 2, Teaching assistance, Winter term 2011–12
   Math 101   Calculus 1, Teaching assistance, Winter term 2010–11

Lecture Notes

1. 'Spectral theory of automorphic forms and related problems,' Lecture Notes for a short course,
   Université de Bordeaux, 2019–2020

Conference and Workshop talks

1. *"Quantum ergodicity on 3-manifolds"*, Winter Meeting in Analysis, Thessaloniki, Greece,
   23rd December 2019

2. *"Quantum ergodicity and the Prime geodesic theorem on 3-manifolds"*, Zeta Functions, CIRM,
   France, 2nd – 6th December 2019

3. *"Spectral theory of automorphic forms on the 3-dimensional hyperbolic space"*, First Congress
   of Greek Mathematicians, Athens, Greece, 25th – 30th June 2018

4. *"The Prime Geodesic Theorem in the 3-dimensional hyperbolic space"*, 16th Panhellenic Con-
   ference on Analysis, Karlovassi, Samos, Greece, 25th – 27th May 2018

5. *"The Prime Geodesic Theorem in the 3-dimensional hyperbolic space"*, The fourth mini sym-
   posium of the Roman Number Theory Association, Rome, 19th – 20th April 2018

6. *"Prime Geodesic Theorem in the 3-dimensional hyperbolic space"*, Arithmétique en Plat Pays:
   Journée Automnale Louvain-la-Neuve, 22nd meeting, 11th December 2017

7. *"Lattice counting problems in the hyperbolic plane"*, Workshop on Spectral Theory, Automor-
   phic Forms and Arithmetic, Copenhagen, 14th – 18th November 2016

8. *"Automorphic forms for $SL(2, R)$ and lattice counting problems"*, 2nd Nisyros Conference on
   automorphic representations and related topics, Nisyros, 13th – 18th June 2016

9. *"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

10. *"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)

11. *"Spectral theory in hyperbolic spaces and counting in discrete subgroups of $SL(2, R)$"*, Workshop on Analysis, Athens, 6th – 10th July 2015

12. *"Hyperbolic lattice point problems"*, Taught Course Centre Event Day in Number Theory, Imperial College London, 13th April 2015

13. *"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 ergodicity on thin sets and closed geodesics on arithmetic 3-manifolds"*, Harmonic Analysis seminar, Aarhus, 29th April 2020

2. *"Quantum ergodicity and the Prime geodesic theorem on 3-manifolds"*, Number Theory seminar, Institute of Mathematics, Bordeaux, 13th December 2019

3. *"Quantum unique ergodicity on arithmetic hyperbolic manifolds"*, Seminar of number theory, Department of Mathematics, Utrecht University, 14th June 2019

4. *"Quantum ergodicity in shrinking balls of arithmetic hyperbolic manifolds"*, Seminar of number theory, Renyi Institute, 5th March 2019

5. *"The Prime Geodesic Theorem in the 3-dimensional hyperbolic space"*, Séminaire Arithmétique, Université de Lille 1, 30th November 2017

6. *"The Lindelöf hypothesis"*, 'My favourite conjecture' number theory study group, King's College London, 14th June 2017

7. *"The analytic large sieve"*, Study group on 'Sieve theory', King's College London, 24th May 2017

8. *"Hyperbolic lattice point counting in conjugacy classes"*, Linfoot seminar, School of Mathematics, Bristol, 23rd November 2016

9. *"Hyperbolic lattice point counting in conjugacy classes"*, Oberseminar Algebra, Ulm Universität, 10th November 2016

10. *"Lattice counting problems in the hyperbolic plane"*, AG-Seminar Algebra, TU Darmstadt, 8th November 2016

11. *"Hyperbolic lattice point counting in conjugacy classes"*, Geometry and Algebra, Geometry and Analysis seminar, Department of Mathematics, Utrecht University, 22nd March, 2016

12. *"Hyperbolic lattice point counting in conjugacy classes"*, Algebra, geometry and number theory seminar, Mathematical Institute, Universiteit Leiden, 21st March, 2016

13. *"Lattice point problems in the hyperbolic plane"*, Analytic Number Theory Seminar, UCL, 25th November 2015

14. *"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

15. *"The hyperbolic lattice point problem in conjugacy classes"*, Analysis Seminar, University of Copenhagen, 28th March 2014

16. *"From Diophantine equations to Hyperbolic geometry"*, Postgraduate Seminar, University College of London, 6th February 2014

17. *"The hyperbolic lattice point problem in conjugacy classes"*, Postgraduate Seminar, University College of London, 17th October 2013

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

Other Conferences, Workshops and Summer schools attended

1. Online Conference in Automorphic Forms via Zoom, 1st June – 5th June 2020

2. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 13th January 2020

3. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 9th December 2019

4. Inaugural France-Korea Conference on Algebraic Geometry, Number Theory, and Partial Differential Equations, Institute of Mathematics, University of Bordeaux, 24th – 27th November 2019

5. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 18th November 2019

6. Journée en l'honneur de Jacques Martinet, 15th November 2019, Université de Bordeaux

7. Arithmétique en Plat Pays: Journée Estivale, Mons, 23rd September 2019

8. Second Symposium on Analytic Number Theory, Cetraro, Italy, 8th – 12th July 2019

9. Arithmetic, geometry, and modular forms: a conference in honour of Bill Duke, Zurich, ETH, 17th – 21st June 2019

10. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 3rd June 2019

11. Analytic Aspects of Automorphic Forms, Lille, 3rd – 5th April, 2019

12. Crosscurrents in number theory, analysis and geometry, Paris, 21st – 22nd March 2019

13. Arithmétique en Plat Pays: Journée Hivernale Lille, 11th March 2019

14. Workshop and Winter School on Local Statistics of Point Sequences, 25th February – 1st March 2019, University of Linz, Austria

15. Integrable systems and automorphic forms, Lille, Laboratoire Paul Painlevé, 19th – 22nd February 2019

16. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 14th January 2019

17. Arithmétique en Plat Pays: Journée automnale, Antwerp, 10th December 2018

18. London-Paris Number Theory Seminar, 25th Meeting, Paris, 26th – 27th November 2018

19. Arithmétique en Plat Pays: Journée printanière, Lille, 18th June 2018

20. Perspectives on the Riemann Hypothesis, Bristol, 4th – 7th June 2018

21. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 19th March 2018

22. Tenth meeting of the GDR Quantum Dynamics, Lille, 21st – 23rd February 2018

23. Rencontres de théorie analytique et élémentaire des nombres, Institut Henri Poincaré, 5th February 2018

24. Mathematical Analysis in Athens – Katavolos and Nestoridis, Athens, 15th – 19th December 2017

25. London-Paris Number Theory Seminar, 23rd Meeting, Paris, 27th – 28th November 2017

26. 3rd Japanese-German Number Theory Workshop, Max Planck Institute for Mathematics, Bonn, 20th – 24th November 2017

27. 30th Journée arithmetique, Caen, 4th – 8th July 2017

28. London-Paris Number Theory Seminar, 22nd Meeting, London, 5th – 6th June 2017

29. Fonctions Zeta Franco-Japonaises, Lille, 13th-17th March 2017

30. Random Waves in London Workshop, King's College London, 3rd – 5th May 2016

31. Intercity Number Theory Seminar, Leiden, 24th March 2016

32. L-functions and Automorphic Forms, Heidelberg, 22nd – 26th February 2016

33. London-Paris Number Theory Seminar, 19th Meeting, Paris, 8th – 9th November 2015

34. 1st Nisyros Conference on Automorphic Representations and Related Topics, Nisyros, 12th – 17th July 2015

35. Summer School on Operator Theory and Applications and Workshop on Analysis, Athens, 6th–10th July 2015

36. London-Paris Number Theory Seminar, 18th meeting, London, 4th – 5th June 2015

37. Analytic aspects of number theory, ETH Zürich, 18th – 22nd May 2015

38. Taught Course Centre Event Day in Number Theory, Imperial College London, 13th April 2015

39. The Joint British Mathematical Colloquium and British Applied Mathematics Colloquium, Cambridge, 30th March – 2nd April 2015

40. Analytic Number Theory Workshop, Oxford, 29th September – 3rd October 2014

41. Bounded Gaps between Primes, LMS – CMI Research School, Oxford, 22nd – 26th September 2014

42. Building Bridges: 2nd EU/US Summer School + Workshop on Automorphic Forms and Related Topics, Bristol, 30th June – 11th July 2014

43. London-Paris Number Theory Seminar, 16th meeting, London, 9th June 2014

44. British Mathematical Colloquium, London, 4th – 9th April 2014

45. Young Researchers in Mathematics 2013, Edinburgh, 17th – 20th June 2013

46. London-Paris Number Theory Seminar, 14th meeting, London, 3rd – 4th June 2013

47. Taught Course Centre Graduate Event Day on Number Theory, Bristol, 21st May 2013

Study groups

1. 'Additive Number theory', Université de Lille, February 2019 – May 2019

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. Coorganizer of the conference 'Analytic aspects of automorphic forms', Lille, 3rd – 5th April 2019

2. Coorganizer of Séminaire Théorie des Nombres, Bordeaux, 2020 – 2021

Community service

Reviewer for Mathematical Reviews/MathSciNet, for Zentralblatt MATH and for several mathematical journals

Languages

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