

### PERSONAL INFORMATION

# Alexandru A. Popa

Institute of mathematics "Simion Stoilow" of the Romanian Academy Calear Grivitei 21, Bucharest, Romania

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Date of birth 15/06/1975 | Nationality Romanian

#### **WORK EXPERIENCE**

2008-present Institute of Mathematics "Simion Stoilow" of the Romanian Academy

Currently Research Scientist I

2008-2009 College of the Holy Cross

Visiting Assistant Professor

2006-2008 University of Pennsylvania

Lecturer

2003-2006 Princeton University

Lecturer

**EDUCATION** 

1998-2003 Harvard University, Ph.D. in mathematics

Thesis: Central values of L-series over real quadratic fields

Advisor: B. H. Gross

1994-1998 Princeton University, B.A. Summa cum Laudae in Mathematics

#### **RESEARCH INTERESTS**

Number Theory: modular forms, automorphic representations

#### **GRANTS**

## DIRECTOR:

- Proiect de cercetare exploratorie PN-III-P4-ID-PCE-2020-2498 financed by the Romanian Council of Scientific Research and UEFISCDI at IMAR, 2021–2023
- Marie Curie International Reintegration grant financed by the European Comision at IMAR, October 2009—September 2013

#### MEMBER:

- PCE grant financed by CNSCSIS at IMAR, October 2017—December 2019 (director Sebastian Burciu)
- Young researcher team grant financed by CNSCSIS at IMAR, November 2015–October 2017 (director Vicenţiu Paşol)
- Young researcher team grant financed by CNSCSIS at IMAR, October 2011—October 2014 (director lonel Popescu)

#### **AWARDS**

- "Gheorghe Lazar" award of the Romanian Academy, December 2016
- "Nicolae Dinculeanu" award of the Romanian Academy, presented at the Eighth Congress of the Romanian Mathematicians, Iaşi, June 2015
- Good Teaching Award for MAT 350, University of Pennsylvania, Fall 2007
- Teaching Award for excellence in teaching at Harvard University, Spring 2000
- George B. Covington Prize for overall undergraduate achievement in mathematics, Princeton University, 1998
- Member of Phi Beta Kappa academic honor society, 1998
- Andrew H. Brown Prize for junior independent work, Princeton University, 1997



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#### **RESEARCH VISITS**

- Max Planck Institute for mathematics, Bonn, February 22–March 7, 2016
- Institut des Hautes Études Scientifique, Bur-sur-Yvette, October 13-November 13, 2014
- Max Planck Institute for mathematics, Bonn, January 21

  —February 20, 2014
- Max Planck Institute for mathematics, Bonn, February 1–March 15, 2013
- Alfréd Rényi Institute of Mathematics, Budapest, October 29–November 4, 2012
- International Centre for Theoretical Physics Trieste, June 18–29, 2012: School and
- Workshop on Computational Algebra and Number Theory,
- Max Planck Institute for mathematics, Bonn, February 11–29, 2012
- Max Planck Institute for mathematics, Bonn, April 10–May 10, 2010
- Max Planck Institute for mathematics, Bonn, July 6–August 6, 2008

#### RECENT CONFERENCE TALKS

- Automorphic forms conference, Budapest, Hungary, 5-9 September 2022
- Conferinta Cercetarii Stiintifice din Academia Romana, online, 23.11,2021
- Online conference on Automorphic forms, zoom, June 1-5, 2020
- 9th Congress of Romanian Mathematicians, Galati, June 29–July 3, 2019
- Transient Transcendence in Transylvania, Brasov, May 13-17, 2019
- Fifth Bucharest Number Theory Day, IMAR, July 2017
- Workshop for Young Researchers in Mathematics, 7th edition, IMAR, May 2017
- Conference on Geometric and combinatorial methods in number theory, June 2016, Iaşi
- Workshop for Young Researchers in Mathematics, May 2016, Constanta
- The 8th Congress of Romanian Mathematicians, June 2015, Iaşi
- Automorphic L-functions workshop, October 2014, University Lille 1

#### **PUBLICATIONS**

- Central values of Rankin L-series over real quadratic fields. Compositio Math. 142 (2006), 811–866.
- Whittaker newforms for archimedean representations of GL(2). J. of Number Theory 128/6 (2008), 1637–1645.
- 3. Rational decomposition of modular forms. Ramanujan J. 26/3 (2011), 419–435.
- 4. (with V. Paşol) *Modular forms and period polynomials*. Proc. London Math. Soc. 107/4 (2013), 713–743.
- 5. (with F.P. Boca, V. Paşol, A. Zaharescu) *Pair correlation of angles between reciprocal geodesics on the modular surface*. Algebra and Number Theory 8-4 (2014), 999–1035.
- 6. (with F.P. Boca, A. Zaharescu) *Pair correlation of hyperbolic lattice angles*. Int. J. Number Theory 10/8 (2014), 1955–1989.
- 7. (with V. Paşol) *On the Petersson scalar product of arbitrary modular forms*. Proc. Amer. Math. Soc. 142 (2014), 753–760.
- 8. (with V. Paşol) *An algebraic property of Hecke operators and two indefinite theta series.* Forum Math. 27/2 (2015), 915–928.
- (with D. Zagier) A combinatorial refinement of the Kronecker-Hurwitz class number relation. Proc. Amer. Math. Soc. 145/3 (2017), 1003–1008.
- 10. On the trace formula for Hecke operators on congruence subgroups. Proc. Amer. Math. Soc. 146/7 (2018), 2749–2764.
- 11. On the trace formula for Hecke operators on congruence subgroups, II. Research in the Math. Sciences (2018), 5:3.
- 12. (with R. Gaba) A generalization of Ramanujan's congruence to modular forms of prime level. J. of Number Theory 193 (2018), 48-73
- 13. (with D. Zagier) *An elementary proof of the Eichler-Selberg trace formula.* J. Reine Angew. Math. 762 (2020), 105-122
- 14. (with A. Diaconu, V. Paşol) Quadratic Weyl group multiple Dirichlet series of Type  $D_4^{(1)}$ . Amer. J. Math., to appear

Name: Alexandru A, Popa

Signature