

# Djordje Milicević

Bryn Mawr College  
Department of Mathematics  
Park Science Center  
101 North Merion Avenue  
Bryn Mawr, Pennsylvania 19010-2899

Office: PSC 362

Phone:

Fax:

email: [dmilicevic@brynmawr.edu](mailto:dmilicevic@brynmawr.edu)

url: <http://www.brynmawr.edu/math/people/milicevic/>

## Current position

2018-2021- Assistant Professor, Bryn Mawr College  
2021- Director of Graduate Studies in Mathematics, Bryn Mawr College

## Areas of specialization

Analysis on Arithmetic Manifolds, Automorphic Forms, Analytic Number Theory

## Appointments held

2023- Present - Professor, Bryn Mawr College (upcoming)

2020 - Guest/Research Fellow, Max-Planck-Institut für Mathematik, Bonn, Germany

2012-2018 - Assistant Professor (tenure-track), Bryn Mawr College

2016 - Guest/Research Fellow, Max-Planck-Institut für Mathematik, Bonn, Germany

2015-2016 - Research Visitor, University of Melbourne, Australia

2011-2012 - Guest/Research Fellow, Max-Planck-Institut für Mathematik, Bonn, Germany

2010-2011 - Visiting Assistant Professor, Amherst College

2006-2010 - T.H.Hildebrandt Research Pt 87744>-241 <0048A3 <0044215BB79 1 Tf (48>-48 Res..426 Tm [<002A48 <di .1

## Education

- 2001-2006 Ph.D. in Mathematics, Princeton University (advisor: Peter Sarnak)  
1996-2000 Dipl.Mat., Faculty of Mathematics, University of Belgrade, valedictorian  
1992-1996 Mathematics High School in Belgrade, valedictorian, best student of the first 30 classes

## Invited research visits

- 2023 Mathematisches Forschungsinstitut Oberwolfach, "Group Actions and Harmonic Maps" iwoa d
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*L*-functions II”, *Ma t h e m ā t e i s* 300(2022):f1603-1613

DOI: [10.1007/s00209-021-02821-8](https://doi.org/10.1007/s00209-021-02821-8), arXiv: [1911.10268](https://arxiv.org/abs/1911.10268)

2021 Djordje Mili evi , Daniel White, “Twelfth moment of Dirichlet *L*-functions to prime power moduli”, *A n n d e S a u d r a m s a u p e e d P i o s e a d s S c e i* 51:4 (2021): 1879–1898

DOI: [10.2422/2036-2145201909\\_008](https://doi.org/10.2422/2036-2145201909_008), arXiv: [1908.09008](https://arxiv.org/abs/1908.09008)

2020 Valentin Blomer, Gergely Harcos, Péter Magyar, “Subconvexity problem for *GL*(2) over number fields”, *J o u r n a l f o r M a t h e m a t i c s* (2020): 1–53

DOI: [10.4171/JEMS/916](https://doi.org/10.4171/JEMS/916), arXiv: [1605.09333](https://arxiv.org/abs/1605.09333)

2017 Valentin Blomer, Étienne Fouvry, Emmanuel Frenkel, Michał Walski, Philippe Michel, Djordje Mili evi , “On moments of twisted *L*-functions”, *A m e r i c a n M a t h e m a t i c s M o n t h l y* (2017): 707–768

DOI: [10.1353/ajm.2017.0019](https://doi.org/10.1353/ajm.2017.0019), arXiv: [1411.7001](https://arxiv.org/abs/1411.7001)

2017 Valentin Blomer, Étienne Fouvry, Emmanuel Frenkel, Michał Walski, Philippe Michel, Djordje Mili evi , “Some applications of smooth *L*-functions with Kloosterman sums”, *P r o c e e d i n g s o f t h e A m e r i c a n M a t h e m a t i c a l S o c i e t y* 147(1): 18–29.

DOI: [10.1134/S0081543817010023](https://doi.org/10.1134/S0081543817010023), arXiv: [1608.07401](https://arxiv.org/abs/1608.07401)

2016 Rizwanur Khan, Djordje Mili evi , Hieu Trung Le, “Non-vanishing of Dirichlet *L*-functions in Galois orbits”, *I n t e r n a t i o n a l M a t h e m a t i c a l R e s e a r c h N o t e s* 2016(16): 6955–6978

DOI: [10.1093/imrn/rnv320](https://doi.org/10.1093/imrn/rnv320), arXiv: [1507.00111](https://arxiv.org/abs/1507.00111)

2016 Djordje Mili evi , “Sub-Weyl subconvexity for Dirichlet *L*-functions to prime power moduli”, *C o m p o s i t i o n e s* 124(2016): 825–875

DOI: [10.1112/S0010437X15007381](https://doi.org/10.1112/S0010437X15007381), arXiv: [1407.4100](https://arxiv.org/abs/1407.4100)

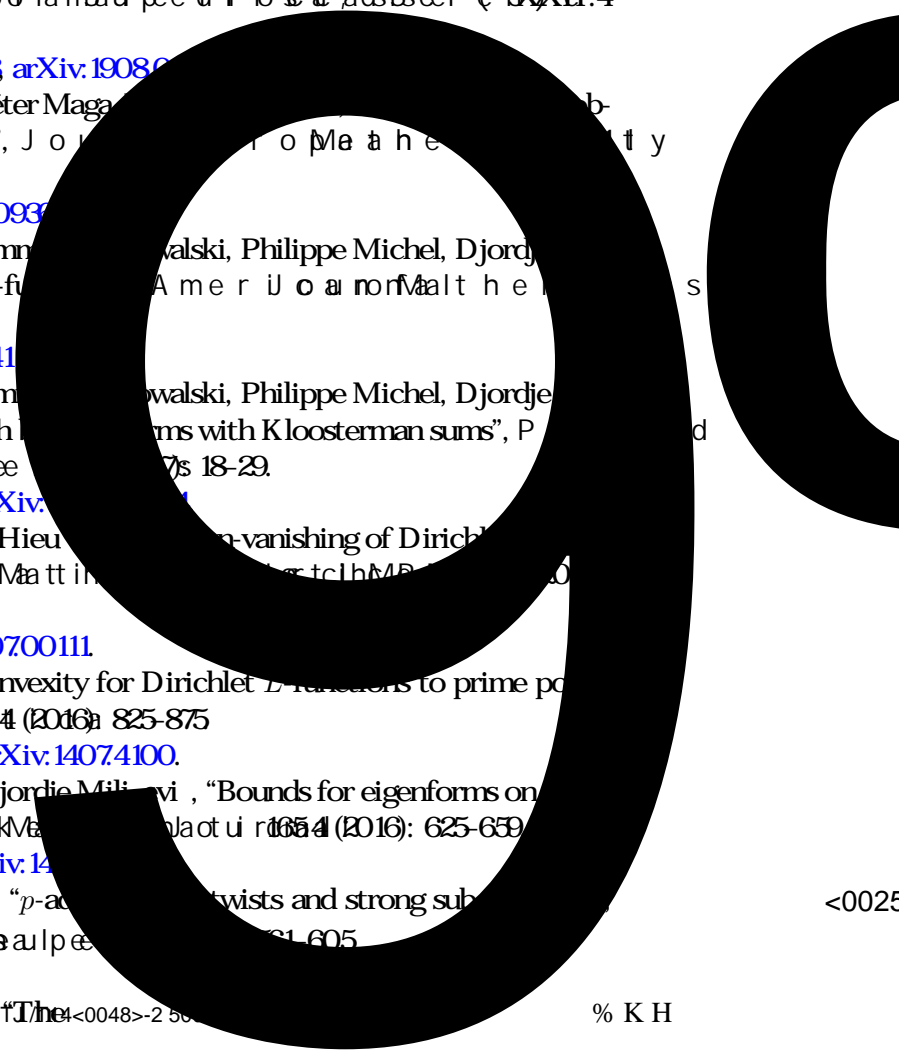
2016 Valentin Blomer, Gergely Harcos, Djordje Mili evi , “Bounds for eigenforms on arithmetic hyperbolic 3-manifolds”, *D u K l a s z e M a t e m a t y k i* 165(4) (2016): 625–659

DOI: [10.1215/00127094-3166952](https://doi.org/10.1215/00127094-3166952), arXiv: [1408.0001](https://arxiv.org/abs/1408.0001)

2015 Valentin Blomer, Djordje Mili evi , “*p*-adic twists and strong subconvexity”, *A n n a l e s e n d e t h e I n s t i t u t P r i n c e t o n* 42(2): 61–605

DOI: [10.24033/asens.2252](https://doi.org/10.24033/asens.2252)

2015 Valentin Blomer, Djordje Mili evi , “The *L*-function of a Hilbert modular form”, *A n n a l e s d e l' I n s t i t u t P r i n c e t o n* 42(2): 607–651



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appear in the *American Journal of Mathematics*, [arXiv:1805.00633](https://arxiv.org/abs/1805.00633)  
2020+ Mikolaj Frzyk, Gergely Harcos, Péter Magyar, Djordje Milićević, “The density hypothesis for horizontal families of lattices”, to appear in the *American Journal of Mathematics*, [arXiv:2007.13961](https://arxiv.org/abs/2007.13961).

2021 Farrell Brumley, Didier Lesesvre, Djordje Milićević, “Conductor zeta function for the  $GL(2)$  universal family”, [arXiv:2105.02068](https://arxiv.org/abs/2105.02068)  
Djordje Milićević, “The explicit Hardy-Littlewood-Atkinson formula in number fields”, preprint.

#### Articles with students

2023 Djordje Milićević, Sichen Zhang “Distribution of Kloosterman paths to high prime power moduli”, *Transactions of the American Mathematical Society* (2023): 636-669.

[DOI: 10.1090/btran/98](https://doi.org/10.1090/btran/98), [arXiv:2005.08865](https://arxiv.org/abs/2005.08865)

2019 Rizwanur Khan, Ruoyun Lei, Djordje Milićević, “Effective moments of Dirichlet  $L$ -functions in Galois orbits”, *Inventiones in Mathematics* (2019): 475-490.

[DOI: 10.2140/invoke.2019.12.475](https://doi.org/10.2140/invoke.2019.12.475)

2017 Yujie Li, Djordje Milićević, “ $p$ -adic sextic supercongruences of Ramanujan type”.

#### Talks

2023 Number Theory Web Seminar (upcoming)

2023 Mathematisches Forschungsinstitut Oberwolfach, “Group Actions and Harmonic Analysis in Number Theory”

2022 Philadelphia Area Number Theory Seminar (2x)

2022 Automorphic Forms Conference, Erdős Center, Alfréd Rényi Institute of Mathematics

2021 Pennsylvania State University, Algebra and Number Theory Seminar

2021 Philadelphia Area Number Theory Seminar

2020 The Riemann Hypothesis, [arXiv:1905.08900](https://arxiv.org/abs/1905.08900), [DOI: 10.1007/978-1-4939-9836-9\\_10](https://doi.org/10.1007/978-1-4939-9836-9_10)



2013 Temple/Bryn Mawr Number Theory Seminar  
 2013 27<sup>th</sup> Automorphic Forms Workshop, University College Dublin  
 2012 Haverford College, Bi-Co Mathematics Colloquium  
 2012 Hungarian Academy of Sciences, Alfréd Rényi Institute of Mathematics, Number Theory seminar  
 2012 Institut Henri Poincaré, Paris  
 2012 Max-Planck-Institut für Mathematik, Bonn, Number Theory Lunch Seminar  
 2012 Georg-August-Universität Göttingen, Oberseminar Analytic Number Theory  
 2012 Stanford University, Number Theory seminar  
 2012 University of Texas at Austin, Algebra, Number Theory, and Combinatorics seminar  
 2012 Institute for Advanced Study, School of Mathematics, Princeton, Analysis seminar  
 2012 Bryn Mawr College, Bi-Co Mathematics Colloquium  
 2011 University of Copenhagen, Geometry and Analysis seminar  
 2011 Eidgenössische Technische Hochschule (ETH) Zürich, Number Theory seminar  
 2011 Universität zu Köln, Oberseminar Number Theory  
 2011 Serbian Academy of Sciences and Arts, Mathematical Institute, Colloquium  
 2011 École Polytechnique Fédérale de Lausanne, Centre Interfacultaire Bernoulli, Seminar  
 2011 Bryn Mawr College, Bi-Co Mathematics Colloquium  
 2010 Five College Number Theory seminar  
 2010 Princeton Workshop on Quantum Chaos: Arithmetic and Dynamics, Princeton University  
 2010 Amherst College, Mathematics Colloquium  
 2010 Bowdoin College, Mathematics Colloquium  
 2009 University of Michigan, Group Theory, Number Theory, and Representation Theory (GLNT) seminar  
 2008 University of Illinois at Chicago, Number Theory and Arithmetic Geometry seminar  
 2008 Hungarian Academy of Sciences, Alfréd Rényi Institute of Mathematics  
 2007 Johns Hopkins University, Number Theory seminar  
 2006 American Mathematical Society, Sectional Meeting, University of Connecticut  
 2006 University of Michigan, Number Theory seminar  
 2006 City University of New York, Graduate Center, Differential Geometry and Lie Theory seminar  
 2006 *L*-Functions and Related Themes, Analysis in Number Theory program, Centre de Recherches Mathématiques, Université de Montréal  
 2005 University of Texas at Austin, Number Theory seminar  
 2000 Serbian Academy of Sciences and Arts, Mathematical Institute

Reviews and invited contributions

2023 “Beyond the spherical sup-norm problem” (extended abstract, on joint work with Val

[DOI: 10.4171/OWR/2020/26](https://doi.org/10.4171/OWR/2020/26)

- 2011-2018 A MSMA t h e m a t i c a w s / M a t h e m a t i c s M R 2 6 1 5 1 0 (Choi: Poincaré series and the divisors of modular forms), MR2726097 (Bernstein, Reznikov: Subconvexity bounds for triple  $L$ -functions and representation theory), MR2862393 (Zhang: A mean value related to D. H. Lehmer's problem and the Ramanujan's sum), MR2887612 (Munshi: A note on simultaneous nonvanishing twists), MR3003991 (Tang: A note on the Fourier coefficients of Hecke-Maass forms), MR3058727 (Dou/Zhang: Six short chapters on automorphic forms and  $L$ -functions), MR3283005 (Farmer; Koutsoliotas, Lemurell: Maass forms on  $GL(3)$  and  $GL(4)$ ), MR3313407 (Jin, Lim: On the regularized imaginary Doi-Naganuma lifting), MR3347956 (Manickam, Meher, Ramakrishnan: Theory of newforms of half-integral weight), MR3369905 (Munshi: The circle method and bounds for  $L$ -functions—III:  $t$ -aspect  $GL(3)$   $L$ -functions), MR3544415 (Tang Xiao: Integral moments of automorphic  $L$ -functions), MR3632094 (Kaczorowski, Perelli: Twists and resonance of  $L$ -functions, II)
- 2017 “The sup-norm problem for  $GL(2)$  over number fields” (extended abstract, on joint work with Valentin Blomer, Gergely Harcos, Péter Pál), in “Automorphic forms and arithmetic”, *O b e r w o r k e n* 143 (2017).  
[DOI: 10.4171/OWR/2017/40](https://doi.org/10.4171/OWR/2017/40)
- 2014 “1927. William Lowell Putnam Mathematical Competition”, a section of “The Pi Mu Epsilon 100<sup>th</sup> Anniversary Problems: Part III”, *P i M u E p s i l o n* 114 (2014): 65-99.

#### Grants, prizes, honors & fellowships

- 2019-2024 Grant DMS-1903301: “Distribution and analytic aspects of cusp forms”, PI, National Science Foundation, Division of Mathematical

ship, Princeton University  
 2001-2004 Studenica Foundation Fellowship  
 1999-2001 Fellowship of Serbian Academy of Sciences and Arts  
 1999 International Mathematics Competition for University Students, Grand First Prize  
 1997-1998 Annual Vojt ch Jarnik Competition in Mathematics, two First Prizes  
 1997 International Mathematics Competition for University Students, First Prize  
 1995-1996 International Mathematical Olympiad, two Silver Medals  
 1996 International Olympiad in Informatics, Bronze Medal  
 1995-1996 Balkan Mathematical Olympiad, two First Prizes  
 1992-1996 Four first ranks at federal competitions in Mathematics, four first prizes at republic competitions in Mathematics, first prize (1996) at republic and federal competitions in Computer Science

### Teaching experience

#### Bryn Mawr College

2012 Math 102 Calculus II (Fall '13)  
 Math 201 Multivariable Calculus (Fall '16)  
 Math 203 Linear Algebra (2x Spring '21, Spring '21)  
 Math 290 Elementary Number Theory (Spring '13, Spring '15, Fall '18)  
 Math 301 Real Analysis I (Fall '13, Fall '17, 2x Fall '21)  
 Math 302 Real Analysis II (Spring '14, Spring '18, Spring '19, Spring '22)  
 Math 390 Number Theory (Fall '17, Spring '22)  
 Math 395/396/702 Research Seminar (every semester since Fall '13)  
 Math 398/399 Senior Conference (Fall '12, Spring '14, Fall '14, Spring '18)  
 Math 400 Senior Thesis (Fall '21, Spring '22)  
 Math 400 Senior Thesis (course coordinator: Spring '21; Spring '22)  
 Math 403 Number Theory (independent study course, Fall '12)  
 Math 501 Graduate Analysis I (Fall '12, Fall '14, Fall '16, Fall '18, Fall '22)  
 Math 502 Graduate Analysis II (Spring '13, Spring '15, Spring '17, Spring '19, Spring '21)  
 Mathematics major advisor  
 2012 Supervised Ph.D. theses of:  
 Lindsay Dever, Ph.D., 2022  
 Daniel White, Ph.D., 2021  
 Frank Romascavage, Ph.D., 2017  
 2016 M.A. thesis advising  
 2013 Undergraduate honors thesis advising  
 2014/15 Led the weekly Mathematics Problem Solving Seminar

#### Amherst College

2010-2011 Math 12 Intermediate Calculus (Fall '10)  
 Math 13 Multivariable Calculus (Fall '10, Spring '11)  
 Math 28 Introduction to Analysis (Spring '11)  
 Math 98 Number Theory and Analysis (special topics course, Spring '11)



Led a weekly practice seminar for the William Lowell Putnam examination (Fall '10)  
Mentored independent reading courses in Number Theory and Linear Algebra

University of Michigan

2006-2010 Math 214 Linear Algebra and Differential Equations (Fall '06)  
Math 217 Linear Algebra (Winter '07, Fall '09, Winter '10)  
Math 289 Problem Seminar (Fall '08, Winter '09, Fall '09, Winter '10); Michigan ranked  
in top 10 in the 2008 Putnam exam (first since 1999)  
Math 475 Elementary Number Theory (Fall '07)  
Math 476 Michigan (Fall '07) he DR #U, ðñv!S D W Q

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tee, Chair of the Questions Committee (2013), authored nine original problems used in the 2011, 2012, and 2013 competitions

2010-2013 Grading the William Lowell Putnam Examination

2000-2009 International Mathematics Competition for University Students: served on the High Jury and as a team leader in seven competitions, for the University of Michigan ('08 '09), Princeton University ('04, '05 '06), and the University of Belgrade ('00, '01), member 2004's

Committee work

- 2021-2021 Serving on the Graduate Council, Bryn Mawr College (Co-Chair 2021/22)
- 2021 Led the working committee of faculty and graduate students to reform the preliminary exams and advancement to Ph.D. candidacy in Mathematics, Bryn Mawr College
- 2021 Served on the Advisory Council of the Faculty, Bryn Mawr College
- 2021 Served on the Selection Committee for the next Dean of Graduate Studies, Bryn Mawr College
- 2019 Served on a doctoral defense committee in Mathematics, University of Illinois at Chicago
- 2018-2019 Served on the Search committee for the new Science Librarian and Coordinator of the Collier Science Library, Bryn Mawr College
- 2018-2021 Committee on Libraries, Information and Computing (CLIC), Bryn Mawr College
- 2017-2020 Faculty Representative to the Administrative Board of the Academic Honor System, Bryn Mawr College
- 2017 Served on a

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Professional

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