

Dori Bejleri | Curriculum vitae

University of Maryland, College Park – Department of Mathematics

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Academic Positions

- 2023 - **Assistant Professor**, University of Maryland, College Park.
- 2019 - 23 **Benjamin Peirce Fellow**, Harvard University.
- 2019 - 21 **NSF Postdoctoral Fellow**, Harvard University.
- 2018 - 19 **NSF Postdoctoral Fellow**, Massachusetts Institute of Technology.

Education

- 2014 - 18 **Ph.D. in Mathematics**, *Brown University*, Providence, RI, USA.
Advisor: Dan Abramovich
- 2009 - 13 **B.Sc. in Mathematics**, *California Institute of Technology (Caltech)*, Pasadena, CA, USA.
Graduated with Honors

Publications

- 2023 **Wall crossing for moduli of stable log varieties**, *With Kenny Ascher, Giovanni Inchiostro, and Zsolt Patakfalvi*, **Annals of Mathematics**, Volume 198, Issue 2. arXiv:2108.07402.
- 2023 **Smoothability of relative stable maps to stacky curves**, *With Kenny Ascher*, **Épjournal Géom. Algébrique.**, Volume 7. arXiv:2108.05324.
- 2023 **Compact moduli of elliptic K3 surfaces**, *With Kenny Ascher*, **Geometry & Topology**, Volume 27, Issue 5. arXiv:1902.10686.
- 2022 **Compact moduli of degree one del Pezzo surfaces**, *with Kenny Ascher*, **Mathematische Annalen**, Volume 384, Issue 1-2. arXiv:1802.00805.
- 2021 **Stable pairs with a twist and gluing morphisms for moduli of surfaces**, *With Giovanni Inchiostro*, **Selecta Mathematica N.S.**, Volume 27, Issue 3. arXiv:1902.0050.
- 2021 **Moduli of weighted stable elliptic surfaces and invariance of log plurigenera**, *with Kenny Ascher*, **Proceedings of the London Mathematical Society (3)**, Volume 122, Issue 5. arXiv:1702.06107.
- 2021 **Moduli of double covers and degree one del Pezzo surfaces**, *With Kenny Ascher*, **European Journal of Mathematics**, Volume 7, Issue 2. arXiv:1910.05198.
- 2020 **Motivic Hilbert zeta functions of curves are rational**, *with Dhruv Ranganathan and Ravi Vakil*, **Journal of the Institute of Mathematics of Jussieu**, Volume 19, Issue 3. arXiv:1710.04198.
- 2019 **Moduli of fibered surface pairs from twisted stable maps**, *with Kenny Ascher*, **Mathematische Annalen**, Volume 374. arXiv:1612.00792.

- 2018 **The SYZ conjecture via homological mirror symmetry**, *Expository article*, Superschool on Derived Categories and D-branes (Springer Proceedings in Mathematics and Statistics), arXiv:1710.05894.
- 2017 **Log canonical models of elliptic surfaces**, *with Kenny Ascher*, **Advances in Mathematics**, Volume 320. arXiv:1610.08033.
- 2017 **The tangent space to the punctual Hilbert scheme**, *with David Stapleton*, **Michigan Math Journal**, Volume 66, Issue 3. arXiv:1604.04915.
- 2023 **The topology of equivariant Hilbert schemes**, *with Gjergji Zaimi*, **Res. Math. Sci.**, Volume 10, Issue 3. arXiv:1512.05774.
- 2013 **Quantum field theory over \mathbb{F}_1** , *with Matilde Marcolli*, **Journal of Geometry and Physics**, Volume 69. arXiv:1209.4837.

Preprints

- 2023 **Moduli of boundary polarized Calabi-Yau pairs**, *With Kenny Ascher, Harold Blum, Kristin DeVleming, Giovanni Inchiostro, Yuchen Liu, and Xiaowei Wang*, Submitted, arXiv:2307.06522.
- 2022 **Height moduli on cyclotomic stacks and counting elliptic surfaces over function fields**, *With June Park and Matthew Satriano*, Submitted, arXiv:2210.04450.
- 2022 **The motivic Hilbert zeta function of a planar n -fold thickening of a smooth curve**, Draft available here.
- 2018 **The Hilbert zeta function of a curve singularity is constructible in families**, Draft available here.

In preparation

- 2023 **Moduli of properly elliptic surfaces of irregularity zero**, *With Andres Fernandez Herrero, Giovanni Inchiostro, Josiah Foster, Svetlana Makarova, and Junyan Zhao*, In preparation.
- 2023 **Moduli of \mathbb{Q} -polarized Calabi-Yau pairs**, *With Kenny Ascher, Harold Blum, Kristin DeVleming, Giovanni Inchiostro, Yuchen Liu, Xiaowei Wang, and Chuyu Zhou*, In preparation.
- 2023 **Quot schemes of non-reduced curves and the colored HOMFLY polynomial**, *With Oscar Kivinen*, In preparation.
- 2023 **Submersive topologies in logarithmic geometry**, *With Zijian Yao*, In preparation.
- 2023 **The cotangent complex of perfect pairs**, *With Elden Elmanto and Giovanni Inchiostro*, In preparation.
- 2023 **Deformations of twisted stable pairs**, *With Giovanni Inchiostro*, Draft available upon request.

Teaching

Instructor

- Spring 2024 Introduction to Number Theory (MATH 406)
UMD

- Spring 2022 K3 surfaces (Math 277Z)
Harvard University
- Fall 2022 Algebraic Geometry I (Math 232a)
Harvard University
- Spring 2022 Rationality questions in algebraic geometry (Math 260X)
Harvard University
- Spring 2022 Linear Algebra and Differential Equations (Math 21b)
Harvard University
- Fall 2021 Differential geometry (Math 136)
Harvard University
- Fall 2020 Birational geometry of algebraic varieties (Math 290)
Harvard University
- Spring 2020 Linear Algebra and Differential Equations (Math 21b)
Harvard University
- Fall 2019 Moduli Spaces in algebraic geometry (Math 259x)
Harvard University
- Spring 2018 Calculus I (Math 90)
Brown University
- Summer 2017 Million Dollar Mathematics
Part of the STEM II summer program at Brown University. Co-designed and co-taught an introduction to higher math topics for rising 9th graders. Topics included number theory, graph theory, linear algebra, probability and combinatorics.
- Spring 2017 Calculus II (Math 100)
Brown University
- Undergraduate students mentored**
- Summer 2021 Leo Alcock
Summer reading project on refined enumerative geometry.
- Spring 2019 Hung-Hsun Yu
UROP project on Hilbert schemes of non-reduced curves.
- Fall 2017 Jonghyun Lee
DRP project on Riemann surfaces and Hurwitz theory following Riemann Surfaces and Algebraic Curves: A First Course in Hurwitz Theory.
- Spring 2017 Anabel Tassoni
DRP project on moduli spaces following Hypergeometric functions, my love: modular interpretations of configuration spaces.
- Spring 2017 Nicholas Tomlin
DRP project on category theory following Category theory in context.

Service and professional activities

Conferences and seminars

2023 - **Co-organizer of the University of Maryland Algebraic Geometry Seminar**

- 2025 **Co-organizer of Brin MRC workshop**
Perspectives on Moduli in Algebraic Geometry
- 2021 - 23 **Co-organizer of the Open Neighborhood Seminar**
Harvard's undergraduate math colloquium
- 2020 - 23 **Co-organizer of the Harvard-MIT Algebraic Geometry Seminar**
- 2023 **Co-organizer of Banff Workshop**
Explicit Moduli Problems in Higher Dimensions
- 2023 **Co-organizer of ABGMS, Brown University**
Conference on Arithmetic, Birational Geometry, and Moduli Spaces in celebration of Dan Abramovich's 60th birthday
- 2022 **Guest Speaker at AGNES Summer School on Higher Dimensional Moduli**
Taught a weeklong minicourse on moduli spaces of stable pairs and helped organize afternoon sessions for graduate students to work on research problems in the area.
- 2017 - 18 **Co-founded the Directed Reading Program (DRP) at Brown**
The DRP pairs undergraduate students with graduate student mentors to pursue an independent reading project throughout the semester. The DRP aims to further interactions between undergraduate and graduate students and provide another avenue for pursuing topics of interest in mathematics.
- 2016 - 18 **Co-organized the 3rd-5th annual AMS Graduate Student Conferences at Brown**
A series of subject specific conferences in analysis and probability, geometry and topology, and algebra and number theory, bringing together graduate students from around New England.
- 2017 - 20 **Co-organizer of Bi-annual Algebraic and Tropical Meetings of Brown and YaLE (BATMOBYLE).**
- Departmental service**
- 2019 - 23 **Graduate admissions committee**, Harvard University.
- 2017 - 18 **President of the AMS Graduate Student Chapter**, Brown University.
- 2016 - 17 **Treasurer of the AMS Graduate Student Chapter**, Brown University.
- 2015 - 18 **Graduate Student Council finance committee member**, Brown University.
- 2015 - 18 **Graduate Student Council Mathematics Department representative**, Brown University.
- PhD Thesis Committees**, Changho Han (2019), Hunter Spink (2020), Geoffrey Smith (2020), Dennis Tseng (2020), Gwyneth Moreland (2023).
- Senior Thesis Reader**, Raluca Vlad (2022).
- Other**
- 2021 - **Editor**, Albanian Journal of Mathematics.
- 2021 - 22 **Math Includes**, Mentorship program at Harvard University.
- 2017 - 18 **Brown Math Circle**, Lead several sessions.

Referee, *Journal of the American Mathematical Society*, *Inventiones*, *Journal of the European Mathematical Society*, *Geometry & Topology*, *Algebra & Number Theory*, *Journal of Algebraic Geometry*, *Manuscripta*, *Advances in Mathematics*, *Revista Matemática Complutense*, *Springer Proceedings*, *Notices of the American Mathematical Society*, *Manuscripta Mathematica*.

Reviewer, Mathscinet.

■ Awards

- 2019 - 2021 Certificate of Teaching Excellence
Derek Bok Center for Teaching and Learning, Harvard University (two awards)
- 2018 NSF Mathematical Sciences Postdoctoral Research Fellowship
- 2016, 2017 Joukowsky Summer Research Award
Brown University

■ Talks and presentations

Over 50 invited talks at institutions and conferences including: AMS Sectional Meetings, Banff International Research Station, Boston College, Boston University, Brown University, Caltech, Casa Matemática Oaxaca, Center of Mathematical Sciences and Applications, Columbia, Goethe University Frankfurt, Harvard, JHU, MIT, Northeastern, Ohio State, Princeton, Simons Foundation, Stanford, Stony Brook, University of Alberta, University of British Columbia, UC Berkeley, UC Davis, UC Boulder, University of Georgia, University of Illinois at Chicago, University of Maryland, UMass Amherst, UNC Chapel Hill, University of South Carolina, University of Southern California, UT Austin, University of Toronto, University of Washington, Yale.

Complete list available upon request.