

PETER DILLERY

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RESEARCH INTERESTS

Local and global Langlands correspondence and related aspects of algebraic geometry.

EMPLOYMENT

Oregon State University

Assistant Professor

Corvallis, OR

September 2026–

University of Bonn

Research Assistant (with Jessica Fintzen)

Bonn, Germany

October 2025–September 2026

University of Maryland, College Park

Brin Postdoctoral Fellow

College Park, MD

2022–2025

EDUCATION

University of Michigan

Ph.D. in Mathematics (advisor: Tasho Kaletha)

Ann Arbor, MI

August 2022

University of Virginia

B.A. in Mathematics, GPA 4.0

Charlottesville, VA

June 2017

PAPERS AND PREPRINTS

1. *The extended Fargues–Scholze spectral action* (with Arnaud Eteve). Preprint, 49 pp.
<https://peterdillery8.github.io/ESAdraft21.7.26.pdf>
2. *Moduli of G -bundles on rigid gerbes over affine curves*. Preprint, 35 pp.
<https://arxiv.org/abs/2602.19382>
3. *Global rigid inner forms*, appendix to *Courbes et fibrés vectoriels en théorie de Hodge p -adique globale* by S. Daniel Li-Huerta. Preprint.
<https://arxiv.org/abs/2602.04978>
4. *A Tannakian description of the local Kaletha gerbe* (with Alexander Bertoloni Meli). Preprint, 26 pp.
<https://arxiv.org/abs/2601.07042>
5. *Vector bundles on cones over a Fargues–Fontaine curve* (with Kiran Kedlaya). Preprint, 17 pp.
<https://kskedlaya.org/papers/affine-cone.pdf>
6. *Non-basic rigid packets for discrete L -parameters* (with David Schwein). Preprint, 41 pp.
<https://arxiv.org/abs/2408.13908>
7. *Isocrystals and limits of rigid local Langlands correspondences*. Accepted, **Algebra and Number Theory**. 39 pp.
<https://arxiv.org/abs/2312.09195>
8. *A stacky generalized Springer correspondence and rigid enhancements of L -parameters* (with David Schwein). Under revision, **Journal of the Institute of Mathematics of Jussieu**. 46 pp.
<https://arxiv.org/abs/2308.11752>
9. *Rigid inner forms over global function fields*. **Journal of the Institute of Mathematics of Jussieu**, 2025. 62 pp.
<https://arxiv.org/abs/2110.10820>
10. *Rigid inner forms over local function fields*. **Advances in Mathematics**, 2023. 98 pp.
<https://arxiv.org/abs/2008.04472>
11. *The canonical join complex for biclosed sets* (with A. Clifton and A. Garver) [research done as an undergraduate]. **Algebra Universalis** 79:84, 2018. 22 pp.
<https://arxiv.org/abs/1708.02580>
12. *Minimal-length maximal green sequences and triangulations of polygons* (with E. Cormier, K. Serhiyenko, J. Resh, and J. Whelan) [research done as an undergraduate]. **Journal of Algebraic Combinatorics**, 2016. 25 pp.

CONFERENCES AND WORKSHOPS ORGANIZED

- **Oregon State University**
 - Co-organizer, “Corvallis at 50” Summer School (funding pending, July 2027)
- **University of Bonn**
 - Co-organizer, *If Only This Worked*... Junior Research Retreat, Hotel Seemöwe, Eifel region. Supported by the Hausdorff School of Mathematics, €15,000 budget (October 2026)
 - Co-organizer, Mini-workshop on covers of reductive groups, University of Bonn (May 2026)
- **University of Maryland**
 - Co-organizer, “Geometric Approaches to the Local Langlands Program,” Brin Mathematics Research Center, \$40,000 budget, (March 2025)

RESEARCH SUPERVISION

- Victor Hernandez Macias, *A modification of Kaletha’s gerbe*, Master’s thesis, University of Bonn (Fall 2025–present)
- Nir Elber, *Representations of Galois gerbes*, Summer REU, University of Michigan (Summer 2022)

AWARDS

- Rackham Pre-doctoral Fellowship, University of Michigan (Fall 2021–Spring 2022)

TEACHING

University of Bonn*Assistant***Bonn, Germany**

Winter 2025/26–Summer 2026

- V4A9 Number Theory I — Representation Theory of Reductive p -adic Groups 1 (taught by Jessica Fintzen), Winter semester 2025/2026
- V3A4 Grz. Zahlentheorie — Algebraic Number Theory (taught by Aleksander Horawa), Summer semester 2026
- V4A2 Algebraic Geometry II (taught by Gebhard Martin), Summer semester 2026

University of Maryland, College Park*Instructor of record***College Park, MD**

Fall 2022–May 2025

- Math 403, Abstract Algebra (Spring 2025) · Math 405, Abstract Linear Algebra (Fall 2024)
- Math 406, Number Theory (Fall 2022, Spring 2023, Spring 2024)
- Math 120, Business Calculus I [220-person lecture] (Fall 2023)

University of Michigan*Graduate Student Instructor—instructor of record***Ann Arbor, MI**

Fall 2017–Spring 2022

- Math 116, Calculus II [primary instructor] (Fall 2019, Fall 2020)
- Math 115, Calculus I [primary instructor] (Fall 2017–Spring 2019)

SERVICE AND OUTREACH

- **University of Maryland**
 - Co-organizer, Number Theory and Representation Theory Seminar (Fall 2023–May 2025)
 - DC Math Circle (Fall 2024–present): taught mathematical enrichment classes to middle-schoolers in the DC area
 - Co-organizer, RIT seminar on “The stack of Langlands parameters” (Spring 2024)
 - Contributed lessons to the DEI STEM repository, Indiana University Social Roles Laboratory (Spring 2024)
 - Reviewer for MathSciNet (Fall 2023–present)
 - Co-organizer, Lie Groups and Representation Theory Seminar (Fall 2022–Spring 2023)
 - Organizer, UMD Number Theory Lunch (Spring 2023–Spring 2024)
- **University of Michigan**
 - Co-supervisor, Michigan REU project (Summer 2022)
 - Michigan Math Corps (Fall 2020–Spring 2021): math outreach and mentoring for middle-schoolers in Ypsilanti
 - Michigan Math Circle (Fall 2019): taught mathematical enrichment classes to Ann Arbor middle-schoolers
 - Organizer, graduate student and postdoc number theory happy hour (Fall 2020–Spring 2021)
 - Co-organizer, student arithmetic geometry learning seminar (Fall 2019)

SELECTED INVITED TALKS (GIVEN OR FORTHCOMING)

- London Number Theory Seminar, King’s College London. May 2026.
- Number Theory Seminar, University of Sheffield, UK. December 2025.
- Canadian Rockies Representation Theory Seminar, University of Calgary. April 2025.
- Mathematics Colloquium, Texas Christian University. April 2025.
- Séminaire d’arithmétique à l’UMPA de Lyon, ENS Lyon. January 2025.
- Séminaire Groupes Réductifs et Formes Automorphes, IMJ-PRG. January 2025.
- Oberseminar Arithmetische Geometrie und Darstellungstheorie, MPIM Bonn, Germany. January 2025.
- Mini Workshop on Arithmetic and Representations, Yau Mathematical Sciences Center, Tsinghua University, Beijing. December 2024.
- Ramanujan-Serre Number Theory Seminar, University of Virginia. November 2024.
- Lie Groups Seminar, MIT. October 2024.
- Number Theory/Representation Theory Seminar, Boston College. October 2024.
- Number Theory Seminar, Duke University. October 2024.
- Mathematics and Statistics Colloquium, American University. September 2024.
- Number Theory/Representation Theory Seminar, University of Maryland. September 2024.
- Number Theory Seminar, University of Arizona. April 2024.
- Arithmetic Geometry Seminar, The Graduate Center (CUNY). March 2024.
- Number Theory Seminar, Johns Hopkins University. December 2023.
- Number Theory/Representation Theory Seminar, University of Maryland. November 2023.
- Number Theory Seminar, Johns Hopkins University. October 2022.
- Lie Groups and Representation Theory Seminar, University of Maryland. September 2022.
- Number Theory Seminar, University of Copenhagen (2 talks). June 2022.
- Lie Groups Seminar, MIT. May 2022.
- Ramanujan-Serre Number Theory Seminar, University of Virginia. March 2022.
- Junior Number Theory Days, Johns Hopkins University. December 2021.
- Automorphic Project and Research Seminar. October 2021.
- Number Theory RTG Seminar, University of Michigan. September 2021.
- Number Theory RTG Seminar, University of Michigan. August 2020.

LANGUAGES

English (fluent) · Spanish (fluent reading, advanced speaking) · French (fluent reading, intermediate speaking)