Isabel M. Vogt

University of Washington at Seattle
Department of Mathematics
Padelford Hall
Seattle, WA 98195 USA

Citizenship: USA and Switzerland
ivogt@uw.edu
http://faculty.washington.edu/ivogt
Last Updated: October 10, 2020

EMPLOYMENT

2020 –	Assistant Professor, University of Washington in Seattle
2019 – 2020	National Science Foundation Postdoctoral Scholar, Stanford University

EDUCATION

2014 – 2019	Ph.D. Pure Mathematics, Massachusetts Institute of Technology
	Advisors: Bjorn Poonen and Joe Harris (Harvard University)
2010 – 2014	A.B. Mathematics and Chemistry and Physics, Harvard University, summa cum laude

VISITING POSITIONS

2019	Academic Guest, Institut Henri Poincaré, "Reinventing Rational Points" trimester
2018 – 2019	Exchange Scholar, Stanford University

SELECTED AWARDS AND GRANTS

2019 – 2023	NSF Mathematical Sciences Postdoctoral Research Fellowship, (DMS-1902743, $150K)
2019	Maryam Mirzakhani Postdoctoral Fellowship at Stanford University
2018	MIT Graduate Student Appreciation Award
2017 – 2018	NSF DMS-1821177 for Graduate Workshop in Algebraic Geometry (PI B. Poonen, $7600)
2017 – 2018	IAS WAM Charles and Lisa Simonyi Ambassadorship, (with R. Ramadas, $3K)
2014 – 2019	NSF Graduate Research Fellowship
2015	George Lusztig PRIMES Mentorship Award
2015	MIT Graduate Women of Excellence Award
2014	Friends of Harvard Math Thesis Prize
2014	Robert Fletcher Rogers Prize, Harvard Math Table
2012 – 2014	Barry M. Goldwater Scholarship
2011 – 2014	Harvard Derek Bok Center Certificate of Distinction and Excellence in Teaching (4 times)

PUBLICATIONS AND PREPRINTS

1. A transcendental Brauer–Manin obstruction to weak approximation on a Calabi–Yau three-fold (with S. Hashimoto, K. Honigs, and A. Lamarche), preprint, `arXiv:2009.05862`

2. Global Brill–Noether theory over the Hurwitz Space (with Eric Larson and Hannah Larson), preprint, `arXiv:2008.10765`

3. Stability of normal bundles of Brill–Noether space curves (with Izzet Coskun and Eric Larson), submitted, `arXiv:2003.02964`

4. An enriched count of the bitangents to a smooth plane quartic curve (with Hannah Larson), submitted, `arXiv:1909.05945`

5. Low degree points on curves (with Geoffrey Smith), *Int. Math. Res. Not.*, 2020, `arXiv:1906.02328`

6. A local-global principle for isogenies of composite degree, *Proc. Lond. Math. Soc.*, 2020, `arXiv:1801.05355`

7. Constants in Titchmarsh divisor problems for elliptic curves (with R. Bell, C. Blakestad, A.C. Cojocaru, A. Cowan, N. Jones, V. Matei, and G. Smith), *Res. Number Theory*, 6(1):Art. 1, 24, 2020, `arXiv:1706.03422`

8. Interpolation for Brill–Noether curves in $\mathbb{P}^4$ (with Eric Larson), *Eur. J. Math.*, 2020, `arXiv:1708.00028`

9. Abelian varieties isogenous to a power of an elliptic curve over a Galois extension, *J. Théor. Nombres Bordeaux*, 31(1):205-213, 2019, `arXiv:1706.04963v1`

10. Elliptic fibrations on covers of the elliptic modular surface of level 5 (with F. Balastrieri, J. Desjardins, A. Garbagnati, C. Maistret, and C. Salgado.) *WINE II: Contributions to Number Theory and Arithmetic Geometry*, AWM Springer Series 11, 2018, `arXiv:1705.03527v1`

11. Interpolation for Brill–Noether space curves. *Manuscripta Math.*, 156(1), 2018, `arXiv:1611.00081v2`

12. Powers in Lucas sequences via Galois representations. (with Jesse Silliman.) *Proc. Amer. Math. Soc.* 143 2015, `arXiv:1307.5078v2`

Computer Programs

13. Binary Recurrence Sequences, Sage release 5.13

Expository articles

14. A Guide to Organizing a Virtual Conference, (with J. Alper and D. Litt.) *Notices Amer. Math. Soc.*, 67(8):1135-1138, 2020.

15. How to organize a graduate workshop, (with R. Ramadas.) *Notices Amer. Math. Soc.*, 66(11):1823-1827, 2019.

16. Thinking positive: arithmetic geometry in characteristic p, (with R. Bell, J. Hartmann, V. Karemaker, and P. Srinivasan.) *Notices Amer. Math. Soc.*, 66(2):239-241, 2019.

Invited Conference Talks

2021	(*upcoming*) JMM, AMS special session on Galois cohomology in arithmetic geometry
2020	Monodromy and Galois groups in enumerative geometry, ICERM
	ANTS-XIV, University of Auckland, *plenary talk*
	(*cancelled*) CNTA XVI, Fields Institute Toronto
	(*cancelled*) Texas Algebraic Geometry Symposium (TAGS), Rice University

Arithmetic Geometry Online in Zoom, Everyone (AGONIZE)
(*cancelled*) Shanks workshop on "Real enumeratrive geometry and beyond", Vanderbilt
JMM, Denver, AMS special session on arithmetic Galois actions
JMM, Denver, AMS special session on rational points on algebraic varieties
JMM, Denver, AMS special session on singularities and characteristic classes
2019 Stability, moduli spaces and applications, U. Illinois – Chicago
Western Algebraic Geometry Symposium (WAGS), University of Utah
Modular forms, arithmetic and women in mathematics, Emory University
Rational points on irrational varieties, Institute Henri Poincaré
Arithmetic of low-dimensional abelian varieties, ICERM
Barrett Lectures at University of Tennessee at Knoxville
AMS Sectional Meeting, U. Hawaii, special session on arithmetic geometry
Hawai'i Number Theory Conference, session on arithmetic geometry
Arithmetic and Geometry of Surfaces, U. Wisconsin – Madison
JMM, Baltimore, AMS special session on arithmetic statistics
2018 Explicit methods in number theory, Oberwolfach
Biannual algebraic and tropical meetings of Brown and Yale
AMS Sectional Meeting, Northeastern, special session on geometry of moduli spaces
2017 AMS Sectional Meeting, U. Central Florida, special session on algebraic curves
Brown University, AMS graduate student conference in algebra and number theory

Invited Seminar Talks

2020 University of Washington, Algebra and algebraic geometry seminar
Front Range Algebraic Geometry and Number Theory seminar
National algebraic geometry seminar of Mexico, online
Zoom Algebraic Geometry Marathon
Northwestern, UIC, Chicago, Online algebraic geometry seminar
UC San Diego, Online algebraic geometry seminar
UC Davis, Algebraic geometry seminar
2019 University of Georgia, Number theory seminar
University of Michigan, Number theory seminar
Stanford University, Number theory seminar
Duke University, Algebraic geometry seminar
Stanford University, Algebraic geometry seminar
University of Oregon, Algebra seminar
Brown University, Algebraic geometry seminar
UC San Diego, Number theory seminar
UC Irvine, Number theory seminar
UCLA, Number theory seminar
UW Seattle, Colloquium
Pennsylvania State University, Number theory seminar
2018 University of Illinois at Chicago, Colloquium
Georgia Tech, Algebra seminar
Rice University, Algebraic geometry and number theory seminar
Rutgers University, Algebra seminar

NYU Courant Institute, Algebraic geometry seminar
University of Pennsylvania, Algebra seminar
UW Seattle, Number theory seminar
UC Berkeley, Arithmetic geometry seminar
SF State, Geometry and topology seminar
UC Davis, Algebraic geometry seminar
Stanford University, Algebraic geometry seminar
2017 SUNY Stony Brook, Algebraic geometry seminar
Georgia Tech, Algebra seminar
University of Chicago, Algebraic geometry seminar
Boston University, Number theory seminar
Yale University, SUMRY colloquium
2016 University of Illinois, Chicago, Algebraic geometry seminar
University of Illinois, Chicago, Number theory seminar

TEACHING

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Teaching assistant
Fall 2017 18.06: Linear Algebra (overall evaluation score 6.5/7)
Spring 2014 18.783: Elliptic Curves
HARVARD UNIVERSITY, Course assistant
2011 – 2014 Math 23a&b: Linear Algebra and Real Analysis I & II
(overall evaluations: F11: 4.8/5, S12: 4.9/5, F12: 4.4/5, S13: 4.6/5, S14: 5/5)
2012 Math S317: An Algebraic View of Geometry

LEADERSHIP

CONFERENCE ORGANIZER
2020 Women in Algebraic Geometry Research Collaboration Conference, ICERM
Co-organizers: Melody Chan, Antonella Grassi, Rohini Ramadas, and Julie Rana
2020 Western Algebraic Geometry Online (WAGON)
Co-organizers: Jarod Alper and Daniel Litt
2019 AMS MRC: "Explicit Methods in Arithmetic Geometry in Characteristic p",
Co-organizers: Renee Bell, Julia Hartmann, Valentijn Karemaker, and Padma Srinivasan
2018 Grad Workshop in Algebraic Geometry for Women and Mathematicians of Minority Genders,
Co-organizer: Rohini Ramadas

PROGRAM COORDINATOR
2014 – 2018 MIT PRIMES Circle

SEMINAR ORGANIZER
2020 – University of Washington Number Theory Seminar
Co-organizers: Farbod Shokrieh and Bianca Viray
2019 – 2020 Stanford Algebraic Geometry Seminar
Co-organizer: Ravi Vakil

DEPARTMENT SERVICE

2020 –   Diversity Committee, University of Washington
2017 – 2018   Diversity Committee, MIT

OUTREACH AND SERVICE TO THE COMMUNITY

2020   Project leader, Women in Algebraic Geometry at ICERM (with B. Viray)
2020   Project leader, Workshop on arithmetic geometry, number theory and computation, ICERM
          (with P. Srinivasan)
2020   Problem session leader, Arizona Winter School
          Geometry and arithmetic of low genus curves
2018 – 2019   Mentor, Stanford Women in Math Mentoring Program
2018   Problem session teaching assistant, Graduate Workshop in Algebraic Geometry
2011 – 2017   Mentor, Girls' Angle, see `girlsangle.org`
2014 – 2017   Panelist, Harvard Math Table "Graduate school panel"
2016   Guest speaker, MIT Science and Engineering Program for Teachers,
          Mathematical Games
2016   Institute-wide public lecture at MIT Centennial Open House,
          Prime numbers, modular arithmetic, and public key cryptography
2016   Guest speaker, Harvard Math Table
          Parameter spaces for triangles
2015   Representative for MIT PRIMES, NSF STEM Forum, Washington DC
2015   Guest speaker, MIT MathROOTS,
          Parameter spaces for triangles
2015   Guest speaker, MIT Science and Engineering Program for Teachers,
          MIT PRIMES Circle: high school math enrichment at MIT
2012 – 2014   Mentor, MIT PRIMES Circle