

ARUN DEBRAY
CURRICULUM VITÆ

Department of Mathematics, RLM 8.100
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Education.

Ph.D.: in Mathematics, in progress, The University of Texas at Austin expected 2020
B.S.: in Mathematics with Honors, Stanford University, GPA 3.828 June 2015
Thesis: “Modular Representation Theory and the CDE Triangle,” advised by Akshay Venkatesh.

Teaching Experience.

At UT Austin:

Supplemental Instruction (SI) Teaching Assistant: Taught in a “flipped classroom,” teaching sections, holding office hours, and participating in the Sanger Learning Center SI Program.
Math 408N: Differential Calculus for Science Fall 2016

Math 408L: Integral Calculus Fall 2017

Directed Reading Program:
Mentored undergraduates on projects including lattice-based 2016–2018
cryptography, point-set topology, and symplectic geometry.

At Stanford:

50 Series Tutor:
Tutored linear algebra, multivariable calculus, and differential equations. 2013–2015

Other Experience.

- Software Engineering Internship, Dropbox June–August 2015
- Research Internship, AT&T Foundry June–September 2014
- Computer Science Undergraduate Research Internship (CURIS), Stanford University June–September 2013

Service.

Quantum topology and categorification seminar:
Co-organizing a learning seminar on Chern-Simons theory, the Jones Spring 2017
polynomial, and Khovanov homology.

Student geometry seminar:
Organized and ran UT Austin’s graduate student geometry seminar. Fall 2016, Fall 2017

UT Math Club:
Spoke at UT Austin’s undergraduate math club on SET and maximal Fall 2015, Spring 2016, Fall 2016
caps; cohomology; and Frobenius algebras and TQFTs.

A-Star Math Tournament:
Head proctor and co-organizer. 2015

Berkeley Math Tournament: Proctor and grader.	2012, 2015
Stanford Math Tournament: Head proctor, proctor, and problem writer.	2012, 2013, 2014
American Regions Math League (ARML): Coached the SFBA A2 team.	2012

Honors, Awards, and Fellowships.

Geometry Research and Training Grant (RTG) Fellowship: Department of Mathematics, UT Austin	Spring 2017
Prelim Excellence Award: Department of Mathematics, UT Austin	Fall 2016
Geometry Research and Training Grant (RTG) Fellowship: Department of Mathematics, UT Austin	Fall 2015–Summer 2016
Boothe Prize for Excellence in First-Year Writing: Stanford University	2012

Talks.

- Contributed talk, Texas Analysis and Mathematical Physics Symposium, November 2017
- AT&T Foundry Palo Alto weekly seminar series, January 2017

Conferences Attended.

• Graduate Student Topology and Geometry Conference, University of Indiana	April 2016
• Conference on invertible objects and duality in derived algebraic geometry and homotopy theory, University of Regensburg	April 2017
• Texas Algebraic Geometry Symposium, Rice University	April 2017
• Strongly Correlated Topological Phases of Matter, Stony Brook	June 2017
• Homotopy Theory: tools and applications, UIUC	July 2017
• Topological and Geometric Methods in QFT, Montana State University	August 2017
• Texas Analysis and Mathematical Physics Symposium, UT Austin	November 2017
• Texas Geometry and Topology Conference, University of Houston	February 2018
• Texas Algebraic Geometry Symposium, Texas A&M University	April 2018

Publications.

- (1) (with Sam Gunningham) “The Arf-Brown TQFT of Pin^- Surfaces,” preprint (arXiv:1803.11183).