

## Sonny Arora

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| CONTACT INFORMATION | The Pennsylvania State University<br>109 McAllister Building<br>University Park, PA 16802   | Email: <a href="mailto:sza149@psu.edu">sza149@psu.edu</a><br>Citizenship: U.S.A |
| RESEARCH INTERESTS  | Number Theory, Arithmetic Geometry, and Cryptography.   |   |
| EDUCATION           | <b>Pennsylvania State University</b><br>Ph.D. student <ul style="list-style-type: none"><li>• Advisor: Kirsten Eisenträger</li></ul> <b>University of California at Davis</b><br>B.S. in Mathematics, June 2011<br>B.S. in Computer Science, June 2011  |   |
| PUBLICATIONS        | <i>Constructing Picard Curves with Complex Multiplication</i> , with Kirsten Eisenträger. preprint.<br><br><i>The twisting Sato-Tate group of the curve <math>y^2 = x^8 - 14x^2 + 1</math></i> , with Victoria Cantoral-Farfan, Aaron Landesman, Davide Lombardo, Jackson S. Morrow. Submitted.   |   |
| PRESENTATIONS       | <i>Constructing Picard Curves with Complex Multiplication</i> , Upstate Number Theory Conference, Binghamton University<br><br><i>Constructing Picard Curves with Complex Multiplication</i> , Algebra and Number Theory Seminar, Pennsylvania State University<br><br><i>The Twisting Sato-Tate Group of the curve <math>y^2 = x^8 - 14x^2 + 1</math></i> , Arizona Winter School Project Presentation |   |
| HONORS AND AWARDS   | Departmental Teaching Award for Graduate Assistants, Spring 2014<br><br>Departmental Citation of Excellence, Spring 2011  |   |
| TEACHING EXPERIENCE | Math 251 (Ordinary and Partial Differential Equations) Pennsylvania State University, Spring 2015<br><br>Math 232 (Integral and Vector Calculus) Pennsylvania State University, Spring 2014<br><br>Math 022 (College Algebra) Pennsylvania State University, Spring 2013  |   |

Math 017 (Logic, Sets and Probability) Pennsylvania State University Fall 2013 and Fall 2014

GRADUATE  
COURSEWORK

- Number Theory 1
- Number Theory 2
- Algebraic Number Theory
- Elliptic Curves
- Modular Curves and Shimura Varieties
- Algebraic Geometry I
- Commutative Algebra
- Lie Theory
- Analytic Number Theory
- Real Analysis
- Complex Analysis

WORK  
EXPERIENCE:

Software Engineer at Mevio, August 2011-May 2012

PROGRAMMING  
EXPERIENCE:

MAGMA, Sage, Python, C++, Java, PHP, Javascript

COMMUNITY  
INVOLVEMENT:

Elected delegate for the graduate student government organization, Graduate and Professional Student Association (GPSA), for 2 years. Currently, serving as chair of Student Affairs committee.