Aaron Pixton received the 2009 AMS-MAA-SIAM Frank and Brennie Morgan Prize for Outstanding Research in Mathematics by an Undergraduate Student at the Joint Mathematics Meetings in Washington, DC, in January 2009. Receiving an honorable mention was Andrei Negut.

Citation: Aaron Pixton
Aaron Pixton is the winner of the 2009 Morgan Prize for Outstanding Research by an Undergraduate Student. The award is based on five impressive papers in addition to his Princeton senior thesis. One of Pixton’s papers has already appeared in the Proceedings of the American Mathematical Society; two others have been accepted by Forum Mathematicum and the International Journal of Number Theory, and two others have been submitted. In addition to being creative, Pixton’s work spans a remarkable range of topics, including combinatorial number theory, modular forms, algebraic topology, and Gromov-Witten invariants.

Pixton participated in Research Experience for Undergraduates (REU) programs at Cornell University, the University of Wisconsin-Madison, and the University of Minnesota Duluth, and wrote interesting papers at all three. One of his mentors described his “ability to digest current research papers, to formulate interesting questions…, and within a week’s time, to start solving [them]” as “simply astonishing” and considers his work as “probably stronger than many Ph.D. dissertations”. Another mentor describes the “depth and breadth” of his papers as “amazing”.

Biographical Sketch: Aaron Pixton
Aaron Pixton was born in Binghamton, New York, and has lived in nearby Vestal, New York, all his life. He was interested in mathematics from an early age, when he enjoyed reading recreational math books. His formal study of mathematics began when he took various math classes from Binghamton University during high school.

Pixton spent the past four years studying mathematics at Princeton University, from which he graduated in June 2008. During this time, he took advantage of opportunities to work on original research both at Princeton during the school year and at REUs during the summers.

Pixton is currently at the University of Cambridge doing Part III of the Mathematical Tripos. Next fall, he will be returning to Princeton to enter the Ph.D. program there, where he plans to study some combination of number theory and algebraic geometry. Pixton’s nonmathematical diversions include playing chess, reading fantasy books, and watching his seven cats.

Response: Aaron Pixton
I am extremely honored to have been selected for the 2009 Morgan Prize by the AMS, MAA, and SIAM. I would like to thank everyone who has helped and encouraged me to do research. First, I thank my parents for always supporting my desire to think about mathematics. Next, I thank my coauthors, Tom Church, Carl Erickson, and especially Alison Miller; they not only collaborated and shared their ideas with me, but they also taught me a lot in the process of doing so. I would like to thank Tara Brendle, Ken Ono, and Joe Gallian for giving me interesting mathematics to think about during the enjoyable REUs that they ran. I thank the other students at these research programs for greatly enriching my mathematical experiences. Finally, I would like to thank everyone in the Princeton
Mathematics Department for providing a supportive and stimulating mathematical environment for the last four years; particular thanks are due to Manjul Bhargava for teaching the classes which made me most excited about being a mathematician and to Chris Skinner and Rahul Pandharipande for supervising the research I did at Princeton.

Citation for Honorable Mention: Andrei Negut

The Morgan Prize Committee is pleased to award Honorable Mention for the 2009 Morgan Prize for Outstanding Research by an Undergraduate Student to Andrei Negut. The award recognizes his excellent Princeton senior thesis on “Laumon spaces and many-body systems”, which establishes a large part of a conjecture of Braverman made at the 2006 International Congress of Mathematicians. In addition to this work, Negut has made important contributions to problems in very diverse fields: algebraic cobordism theory and dynamical systems. His recommenders consider Negut to be off to a “spectacular start” and look forward to future great achievements.

Biographical Sketch: Andrei Negut

Andrei Negut was born and lived in Romania until the age of 18, by which time his passion for mathematics had been sparked. He attended Princeton University as an undergraduate, where contacts with some of the world’s best mathematicians and teachers inspired his passion for the subject. At Princeton, he had the chance to pursue several research projects in different fields, honing his area of interest and broadening his appreciation of mathematics. After finishing his undergraduate studies, Negut spent a year in Europe, traveling between several research institutes (i.e., Institut des Hautes Etudes Scientifiques in France, Max-Planck-Institut für Mathematik in Germany, and Institute of Mathematics “Simion Stoilow” of the Romanian Academy), learning mathematics from various perspectives. Next year, he will pursue graduate studies at Harvard University. Apart from mathematics, he enjoys traveling the world, photography, and the Russian culture.

Response: Andrei Negut

I am very honored to have been awarded this prize, which means very much to me on a personal basis. On a more global scale, it makes me very happy to see that the mathematical community carefully watches over young mathematicians and is always willing to offer them its support.

About the Prize

The Morgan Prize is awarded annually for outstanding research in mathematics by an undergraduate student (or students having submitted joint work). Students in Canada, Mexico, or the United States or its possessions are eligible for consideration for the prize. Established in 1995, the prize was endowed by Mrs. Frank (Brennie) Morgan of Allentown, Pennsylvania, and carries the name of her late husband. The prize is given jointly by the AMS, the Mathematical Association of America (MAA), and the Society for Industrial and Applied Mathematics (SIAM) and carries a cash award of US$1,200.

Recipients of the Morgan Prize are chosen by a joint AMS-MAA-SIAM selection committee. For the 2009 prize, the members of the selection committee were: Georgia Benkart, James H. Curry, Maeve L. McCarthy, Michael E. Orrison, Kannan Soundararajan (chair), and Paul Zorn.


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