## MIT-Bound Floridian Receives Public Service Scholarship

by Jeanette Bazis



Jeanette Bazis is a part $ner\ at\ the\ Minneapolis$ law firm Greene Espel PLLP. A 1992 University of Minnesota Law School graduate and a former federal district court clerk, Bazis is a highly regarded litigator whose practice focuses on complex disputes that arise between businesses and their employees. She also merged her business and Intellectual Property litigation skills to return the 1960's smash hit "Louie Louie" to its rightful owners. In 2012 and 2013, Minnesota  ${\bf Lawyer}\ recognized\ Bazis$ as "Attorney of the Year" for her advancement of LGBTQ and genderequity.

The Foundation of the Federal Bar Association is pleased to announce that Brian Reinhart of Palm Beach Gardens, Fla., has been selected to receive the 2018 Public Service Scholarship Award.

A graduate of Oxbridge Academy, Reinhart will receive \$5,000 in tuition assistance as he enters the Massachusetts Institute of Technology in Boston for the fall semester. Reinhart was selected from among 13 applicants who are children of FBA members working as federal government attorneys or serving as federal judges. Reinhart is the son of Hon. Bruce Reinhart, a U.S. magistrate judge for the Southern District of Florida, and Hon. Carolyn Bell, a circuit court judge in Palm Beach County, Fla.

"Brian Reinhart was selected as the winner of the Earl W. Kintner Public Service Scholarship for any number of reasons, and perhaps primarily his incredible dedication to the study of mathematics, leadership within the Florida Student Association of Mathematics and his plan to teach math through accessible computer-based programming so that his love of math can be enjoyed by many others; Brian is an obviously focused and brilliant young man who will continue to maximize his educational opportunities as he matriculates at MIT," said Martha Hardwick Hofmeister, chair of the selection committee for the Public Service Scholarship.

In addition to his many extracurricular activities and outstanding academic record, Reinhart tutored his fellow students in mathematics during the school year and participated in summer math programs. He competed in numerous national competitions, including the American Regions Math League (2017 National Winner), the Princeton University Math Competition (2017 First Place Overall Winner), the Carnegie Mellon Informatics and Mathematics Competition

(2017 First Place in Combinatorics), and the American Mathematics Competition (2017-2018 Team Selection Test Qualifier, the first ever in the state of Florida).

Jason Wiggins, the faculty adviser to the Florida Student Association of Mathematics, praised Reinhart's extraordinary accomplishments and leadership qualities.

"Brian is simply the best mathematics student I have seen from the state of Florida," Wiggins noted in his recommendation. "Through the years, his math accomplishments have literally become legendary.

"As great as he is now, to watch his transformation into the student and person he is now has been remarkable... a charming, thoughtful, charismatic, and funny individual. He is now the older student who mentors the younger ones."

Reinhart wrote in his application essay about his love of math and his desire to create a unique approach to math education.

"I know that most people leave school without appreciating the beauty of mathematics. ... I hope to use my college studies to create an accessible and exciting programming-based math curriculum, as well as an interesting, unrestrictive approach to other kinds of math as an elective ... to give students a view of mathematics which more accurately reflects its artistic, individualized nature that I love." Read Brian's full essay below.

Funding for the Foundation of the FBA's Public Scholarship Award comes from a fund named in memory of Earl W. Kintner, who was a distinguished leader of the Federal Bar Association for many years. Kintner's professional and civic leadership are a model to any aspiring academic. The Foundation of the Federal Bar Association is a 501(c)(3) nonprofit organization; gifts may be tax deductible. For more information visit www.fedbar.org/foundation.

## **Teaching Math as an Art Through Programming**

Ever since I was young, I have loved math. As math progressed from simple addition to more complex algebra and calculus, I became increasingly infatuated with the beauty of the subject. While I was fortunate enough

to receive external instruction and to have wonderful teachers, I know that most people leave school without appreciating the beauty of mathematics.

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In 2002, mathematics professor Dr. Paul Lockhart wrote a 25-page essay titled "A Mathematician's Lament," explaining the shortcomings of the American math education system. Lockhart's essay explores the idea that mathematics should be an individual pursuit akin to art and music, in contrast with strict adherence to a set curriculum as in current American mathematics education. Lockhart suggests that the solution would be a complete overhaul of mathematical pedagogy.

Unfortunately, Lockhart's solution is unrealistic. While his goals are admirable, Lockhart fails to offer a reasonable plan for actually changing the education system.

The good news is, since 2002, American education has evolved thanks to technology. In 2014, Project Tomorrow took a survey of school students and teachers and found that 66 percent of middle and high school students have access to laptops. Because students already have access to the necessary tools, I believe that teaching math indirectly through computer programming in schools is an effective, feasible means of solving the problems Lockhart described.

First and foremost, many of the same topics that are covered in the math curriculum today will still be covered. Because programming will be the focus, however, classes will focus less on rote calculations and derivations, and more on developing an understanding of how to use these calculations. Arithmetic will of course need to be covered, but it can be presented so students can see the utility of addition and subtraction. Algebra, taught as part of programming, will discuss variables and equations in terms of their use in computer programs. Students will then use these equations in programs and SEE what they do. By teaching mathematics through programming, students are directly confronted with the answer to "when am I ever going to use this?"

I naturally hope to use my time at MIT to expand my personal mathematical and programming horizons, but I also hope to be able to establish myself within a network of people who are interested in teaching math well. I know that such a network already exists at some level.

I've personally already made heavy use of such resources. I believe, however, that teaching math through programming is a unique approach—one that stands out because it both solves Lockhart's problems in theory and is reasonable to implement in practice.

While the goal of teaching math through programming is daunting, it's surprisingly within reach. As I noted before, many students already have laptops, so the technology will not be a problem. I hope to use my college studies to create an accessible and exciting programming-based math curriculum, as well as an interesting, unrestrictive approach to other kinds of math as an elective. By doing so, I hope to give students a view of mathematics which more accurately reflects its artistic, individualized nature that Lockhart—and I—love. ⊙

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that can't be won," he says. A good advocate "doesn't waste the court's time," and won't "squander good will on things that don't matter," he adds. "He values honor," says Lemire.

Judge Castel is a firm believer in the jury system and forever impressed by the hard work and dedication of his jurors. The jury system brings together people "who would never have met each other in their daily lives." "In a world where 12 people can't agree on a pizza topping," he says, "their ability to work together to reach a unanimous verdict is amazing."

In addition to running a courtroom, Judge Castel has had the opportunity to travel as a legal ambassador of sorts for the United States Department of Commerce. He's visited Armenia, Bahrain, Kuwait, Tunisia, and Morocco, meeting judges, lawyers, and government personnel of all sorts of legal systems, some fully developed, and some starting afresh. The trips are challenging and demanding, but also deeply rewarding.

"The payback is the people you meet along the way," he says. For the lawyers who appear before him, says Preska, the payback is a lawyer's judge, who knows what it takes to resolve cases.  $\odot$