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National Museum of Mathematics Awards Second Annual “Steven H. Strogatz Prize for Math Communication” to 14 U.S. and International High School Students for Creating Outstanding Projects that Celebrate the Universality of Mathematics Using Social Media, Art, Literature, Videos, and Performance

Alyssa Choi, a student at Stuyvesant High School who lives in Forest Hills, wins Honorable Mention Award for creating a math project that explores the game “Tic-Tac-Toe” and its connection to math

New York, NY (June 23, 2021)—New York City’s [National Museum of Mathematics](#) (MoMath), the only math Museum in North America, awards its second annual “[Steven H. Strogatz Prize for Math Communication](#)” to 14 U.S. and international high school students for outstanding projects that celebrate the universality of math using social media, art, literature, videos, and performance.

MoMath’s global contest will present a total of 1,150 “Pi Dollars” ($1,150 \times 3.14159 = \$3,612.84$) to the first-place winners, runners-up, and honorable mentions during an online award ceremony on Sunday, June 27 at 12 p.m. EDT.

“MoMath is delighted to award the second annual Strogatz Prize to talented high school students who have created exceptional projects that reveal their love of math in so many different ways,” said MoMath’s CEO and Executive Director

Cindy Lawrence. “This friendly competition celebrates students of all backgrounds who, through their unique talents, inspire others to appreciate the beauty and wonder of mathematics in the world around us.”

The “Steven H. Strogatz Prize for Math Communication” is awarded based on content, creativity, and communication. Projects are accepted and judged in categories, which include apps or digital interactives, art, audio, performance, social media, video, and writing.

“It’s a thrill to see the creative work of these students!” said Steven Strogatz, American mathematician and Jacob Gould Schurman Professor of Applied Mathematics at Cornell University. “The winners are all so imaginative, and their projects reflect such great effort to communicate clearly and even entertainingly! Bravo to all of them.”

Honorable mention prize winner Alyssa Choi, a student at Stuyvesant High School who lives in Forest Hills, created a writing project called [“Tic-Tac-Toe”](#) that provides the mathematical background to the game and explores interesting modifications that can be made while playing tic-tac-toe. With the goal of making math accessible to all, Alyssa was able to share her passion for math with others.

Here is a statement from Alyssa Choi:

“My math communication project aims to teach people of all ages and backgrounds about the math behind tic-tac-toe. Inspired by the Finding Fifteen exhibition displayed in MoMath, I decided to delve into the complexity behind this seemingly simple game.

Despite popular belief that tic-tac-toe always results in a tie when played optimally, I discovered a strategy that allows the first player to have an 87.5% chance of winning. In addition, I expanded my research outside of tic-tac-toe’s simple 3x3 board setup by exploring interesting modifications that can be done to it.

For instance, I tested out how the gameplay would change if I increased the width of the board or used a three-dimensional cube as the board. I also connected all of the ideas and strategies I discussed in my research and derived

a mathematical theorem that could calculate the total number of winning moves of any size of a square board. Lastly, I introduced another fun game, Finding Fifteen, and described its features and how it acts as an alternative to tic-tac-toe.”

Alyssa’s *Tic-Tac-Toe* project can be viewed [here](#).