

MATHCOUNTS®

Spring Newsletter

www.mathcounts.org

Vol. 39 Issue 2

Daniel Mai is the 2019 Raytheon MATHCOUNTS National Champion

Daniel Mai was set up for a nail-biting final match-up. He had traveled from his hometown of Acton, Mass. to Orlando, Fla. for his second appearance at the Raytheon MATHCOUNTS National Competition. He had just emerged victorious from a notoriously long 11-minute semifinals match—one where neither he nor semifinalist Sam Wang from Virginia buzzed in with a correct answer for six questions in a row. He was up against Suyash Pandit, the underdog from Oregon who had won the first match of the day, plus his quarter-final and semifinal match-ups to qualify for the finals.

Yet after his tough semifinals match, Daniel clearly found his groove during the final round, sweeping the board as he answered the first three questions of the finals correctly. He cemented his victory when he successfully solved the last problem of the 2019 MATHCOUNTS Competition Series: *What is the quotient of 5040 divided by the product of its unique prime factors?*

Level-headed on stage, 13-year-old Daniel knew the answer was 24—and it only took him 22.53 seconds to figure it out.

Massachusetts coach Josh Frost describes Daniel as humble and hardworking, and it shows in his response to his success. How did he feel after the big win? “Very tired,” Daniel said.



Above: From left: Runner-up Suyash Pandit, National Champion Daniel Mai and Tracey Gray (Vice President, Communications & Public Affairs, Space & Airborne Systems, Raytheon Company).

Below: Actor, author and audiobook narrator Wil Wheaton hosts the Countdown Round for the second year in a row.



After such an action-packed weekend, his response was understandable. The 2019 Raytheon MATHCOUNTS National Competition began with three rounds of written tests on Sunday, May 12, requiring students to work both individually and collaboratively in their four-person state teams. On Monday, May 13, the 12 students with the highest scores on the Written Competition advanced to the Countdown Round, hosted for the second year by actor, author and audiobook narrator Wil Wheaton. This final round challenged students in fast-paced one-on-one match-ups in which competitors had at most 45 seconds to answer each question.

Rankings for the Countdown Round also were determined by the students' scores on the Written Competition. Daniel was one of four individuals with the highest written scores who received a bye in the first match of the Countdown Round, along with Written Competition Champion Jeff Lin, an eighth grader from Lexington, Mass.; eighth grader William Chen from Fremont, Calif., and seventh grader Jessica Wan from San Juan, P.R. The two Countdown Round Semifinalists were Sam Wang and Ethan Zhou, both eighth graders from Virginia.



The 12 Countdown Round participants. Back row from left: Rich Wang, Suyash Pandit, Eric Shen, Alan Kappler, Ram Goel and Karthik Vedula. Front row from left: Sam Wang, Ethan Zhou, Jessica Wan, William Chen, Daniel Mai and Jeff Lin.

Daniel was one of 224 Mathletes from across the country who competed at the 2019 Raytheon MATHCOUNTS National Competition on May 12–13 at the Hilton Orlando Lake Buena Vista at the Walt Disney World Resort. National competitors represented all 50 states, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, the Department of Defense and State Department.

As the National Champion, Daniel received the \$20,000 Donald G. Weinert Scholarship and will appear on “Live! With Kelly & Ryan” on June 7, where he will compete against hosts Kelly Ripa and Ryan Seacrest in a math competition. After that? Daniel has some ideas. His dream is “to find the cure for cancer. I want to do this to better society so that we can live longer and this way, society would have new innovations and progress faster.” With Daniel’s problem-solving skills and ambition, winning the MATHCOUNTS Competition Series is just the beginning.



Runner-up Suyash Pandit concedes to National Champion Daniel Mai.

2019 NATIONAL COMPETITION WINNERS

NATIONAL CHAMPION:

Daniel Mai, MA

- \$20,000 Donald G. Weinert Scholarship
- Trip to U.S. Space Camp

COUNTDOWN ROUND

RUNNER-UP:

Suyash Pandit, OR

- \$7,500 Scholarship

COUNTDOWN ROUND

SEMIFINALISTS:

Sam Wang, VA

Ethan Zhou, VA

- \$3,000 Scholarship each

WRITTEN COMPETITION

CHAMPION: Jeff Lin, MA

- \$2,500 Scholarship

1ST PLACE TEAM:

Massachusetts

Kaylee Ji, Jeff Lin,

Daniel Mai, Max Xu

- \$2,000 Scholarship each
- Trip to U.S. Space Camp

WRITTEN COMPETITION

RUNNER-UP: Daniel Mai, MA

COUNTDOWN ROUND

QUARTER-FINALISTS:

William Chen, CA

Jeff Lin, MA

Jessica Wan, PR

Rich Wang, TX

COUNTDOWN ROUND

PARTICIPANTS:

Ram Goel, OR

Alan Kappler, OR

Eric Shen, CA

Karthik Vedula, FL

2ND PLACE TEAM: Florida

3RD PLACE TEAM: California

Massachusetts Wins Team Competition

The team from Massachusetts, led by coach Josh Frost, won First Place in the Written Competition. This was the first time that the Massachusetts team had won the Competition Series since 2013. Team members Kaylee Ji from Andover, Jeff Lin from Lexington, Daniel Mai from Acton and Max Xu from Westford—all eighth graders—each won a \$2,000 scholarship and a trip to U.S. Space Camp.



From left: Tracey Gray (Vice President, Communications & Public Affairs, Space & Airborne Systems, Raytheon Company), Max Xu, Daniel Mai, Jeff Lin, Kaylee Ji, Coach Josh Frost, John Daegele (Chair, MATHCOUNTS Board of Directors).

The Florida team, led by coach Pushpa Kurian, won Second Place. The team members were Wesley Chen, an eighth grader from Tallahassee; Aaron Hu, a seventh grader from Tallahassee; Razzi Masroor, a seventh grader from Miami and Karthik Vedula, an eighth grader from Tallahassee. The team from California, coached by Peta-Gaye Robinson, won Third Place. The team members—all in eighth grade—were William Chen from Fremont, Alan Lee from Palo Alto, Eric Shen from San Jose and Andrew Wen from Fremont.

MATHCOUNTS Congratulates the 2019 National Competitors

MATHCOUNTS congratulates all 224 national competitors. Advancing to the national level is an outstanding accomplishment, and every Mathlete who participated this year should be incredibly proud of his or her achievements. Links to competition results, photographs and the archived ESPN webcast are available at the [MATHCOUNTS website](#). All national competitors are listed below, with the following special recognitions.

*Two-Time National Competitor***

Three-Time National Competitor***

ALABAMA

Sid Doppalapudi***
 Carol Li
Justin Pan***
 Daniel Zhao

ALASKA

*Camden Armstrong***
 EJ Bailey
*Alex Loomis***
 Sean Raften

ARIZONA

Yoobin Cha
*Marcus Giorza***
 Shaan Keole
*Sai Konkimalla***

ARKANSAS

Ellie Feng
*Aaron Liu***
*Soren Schmidt***
 Dinesh Vasireddy

CALIFORNIA

*William Chen***
 Alan Lee
 Eric Shen
 Andrew Wen

COLORADO

Srinivas Arun
 Jackson Dryg
 Rishi Rai
 Ari Wang

CONNECTICUT

*Mingwen Duan***
 Adeethya Shankar
 Alan Wang
Ryan Yang***

DELAWARE

Perryn Chang
 Anand John
 Mia Lu
 Jonathan Pei

DEPT. OF DEFENSE

*Mason Parker***
*Faisal Ramzi Al Sewaidi***
 Seth Robles
 Brian Song

DIST. OF COLUMBIA

Robert Foster
 Sherlock Grigsby II
 Jonathan Nixon
 Matthew Weitzner

FLORIDA

Wesley Chen
 Aaron Hu
 Razzi Masroor
*Karthik Vedula***

GEORGIA

Ethan Gao
*Richard Yu***
 Kevin Yuan
 Andy Zhang

GUAM

*Kevin Choi***
 Elizabeth Mamczarz
 Jake Tae
*Kangsan Yoon***

HAWAII

Allison Eto
 Adam Inamasu
 Zachary Tyrrell
*Felicity Zhou***

IDAHO

Jieming Mei
 Srikar Surapaneni
*Zihongbo Wang***
 Kevin Xu

ILLINOIS

Jeffrey Chen
 Nathan Ma
 Nate Maydanchik
 Krishna Pothapragada

INDIANA

Ray Li
 Minnie Liang
 Grace Yang
 Harry Zheng

IOWA

*SangHyuk Im***
 Anish Lodh
 Ashley Seo
 Joe Su

KANSAS

David Han
*Naveen Kannan***
 Rebecca Xue
 Nathan Zhang

KENTUCKY

Krishna Bhatraju
 Shaurya Jadhav
*Luke Mo***
 Joseph Vulakh

MICHIGAN

*Vikram Goddla***
 Henry Jiang
 Michael Lu
*Jason Zhang***

MINNESOTA

*Linden Li***
 Aurora Wang
 Andrew Zhang
 Henry Zheng



From left: Luke, Joseph, Shaurya (at back) and Krishna find out they've won the Spirit Award.

LOUISIANA

Ryan Ding
*Ethan Guo***
*Julian Vertigan***
 Alex Wu

MAINE

Albert Bai
 Eamon Flint McGlashan
 Karl Hokkanen
 Noah Manning

MARYLAND

Joshua Hsieh
 David Li
*Nathan Shan***
 Andrew Yuan

MASSACHUSETTS

Kaylee Ji
*Jeff Lin***
*Daniel Mai***
*Max Xu***

MISSISSIPPI

Dhanush Kondabathini
 Leo Mei
Kenny Suzuki***
 Landon Tu

MISSOURI

Yuvan Chali
 Alex Chen
 Wilson Gao
*Nicole Li***

MONTANA

Cadien Archer
 Yuan Du
Edward Guthrie***
 Jonas Zeiler

NEBRASKA

Nixon Hanna
 Jason Jiang
 Cole Welstead
 Kaleb Whitmore

NEVADA

Frank Abbeduto**
 Christopher Bao
 Megan Davi
 Audrey Lim

OHIO

Riddhi Gupta
 Eddie Kong
 Tanishq Pauskar
 Michael Zuo

SOUTH DAKOTA

Vanessa An
 Sampada Nepal
 Gianna Stangeland
 Megan Zhu

VIRGIN ISLANDS

Aisha Khemani
 Julien Loewenstein**
 Ariel Paul
 Ronit Totwani**

NEW HAMPSHIRE

Deetya Nagri
 Roxane Park
 Garima Rastogi
Anshul Rastogi***

OKLAHOMA

Raymond Jiang**
 Timothy Stroup
 Daniel Wang
 Nathan Willcox

STATE DEPARTMENT

Jaeha Hwang
 Avi Kabra
 Owen Lalis**
 Josh Shin

VIRGINIA

Aiden Feyerherm
 Alan Vladimiroff
 Sam Wang**
Ethan Zhou***

NEW JERSEY

Kishan Bava
 Locke Cai
 George Cao
 Bryan Zhang

OREGON

Ram Goel
 Alan Kappler**
 Suyash Pandit**
 Nividh Singh

TENNESSEE

Bryan Ding
 George Hu
 Henry Pitt
 Alex Wang**

WASHINGTON

Joy An***
 Wilson Liu**
 Albert Weng
 Gene Yang**



From left: George Hu, Henry Pitt, Bryan Ding and Coach Maggie Qian.

TEXAS

Amy Chang
 Aaron Guo
 Ray Tang
 Rich Wang

WEST VIRGINIA

Amy Lu**
 Austin Luo
 Lauren Shen**
 Grace Yan

UTAH

Zachary Klein
 Marianne Liu
 Kiran Reddy
 Brian Wei

WISCONSIN

Alexis Hu
 Kartik Ramachandrupa
 Jake Rottier
 Kevin Song

NEW MEXICO

Charles Cai
 Harmony Guan
 Alex Livescu
 Grant Staten**

PENNSYLVANIA

Thrisha Kalpatthi
 Skyler Le
 Ethan Liu
 Vivian Loh

VERMONT

Saksham Bhardwaj**
 Jacob Graham
 Kirk Smith
 Keaton St. Martin

WYOMING

Cooper Kaligis
 Dane Lauritzen
 Felicity Olsson
 Jack Weiss

NEW YORK

Forrest Gao
 Brandon Lou
 Matthew Zhao**
 Davis Zong Jr.

PUERTO RICO

Gustavo Carrion Rodriguez
 Jerry Chen
 Fernando Oliver**
 Jessica Wan**

NORTH CAROLINA

Minseok Park
 Sukrith Velmineti
 Eric Wu**
 Brian Zhang

RHODE ISLAND

William Bruno
 Marie Choi Schattle
 Kamran Pahlavi
 Andrew Song**

NORTH DAKOTA

Rick Peng**
 Dylan Raaum**
Nolan Severance***
 Patrick Shen

SOUTH CAROLINA

Kaylee Chen**
 Scott Fowler
 Angela Mei
 Ahan Shi

**THE NATIONAL MATH CLUB
 GRAND PRIZE WINNING CLUB**

Stonewall Middle School



From left: Alexander Murphy, Pishoy Elias, Purnika Adhikari and Club Leader Kate Roscioli.

“Algenite” Wins First Place at 2019 Math Video Challenge Finals



A video about four friends who race against the clock to make an antidote drink won the 2019 [Math Video Challenge](#). Jordan Adeyemi, Robert Hardy, Naima Johnson and Emily Ramirez—all seventh graders from Ron Clark Academy in Atlanta, Ga.—each won a \$1,000 college scholarship. The team was led by advisor Dr. Valerie Camille Jones and co-advisor Junior Bernadin.



Team Switcharoo Crew introduces their video with a rap. From left: Robert, Emily, Jordan, Naima and Chandler.

Inspired by the video game “Fortnite,” “Algenite” depicts a Freaky Friday-esque switch that can only be fixed with a special drink called Algenite. The video solved problem #76 from the 2018-2019 MATHCOUNTS School Handbook:

Emily purchased two heptajugs and one slope pot for \$74. Jordan purchased two algeforts and one slope pot for \$50. Robert purchased one heptajug and two algeforts for \$57. Based on this, how much does one algefert cost?

Team Switcharoo Crew was one of four teams that presented a video at the 2019 Math Video Challenge Finals, which took place on Monday, May 13 at the Hilton Orlando Lake Buena Vista at the Walt Disney World Resort. The 224 national competitors voted to determine the winning video.



The team members of RMSPG2018 present their video. From left: Johnny Sevilla, Karol Lopez Valadez, Isaias Barrera, Jamie Clemons Richardson, and MATHCOUNTS Executive Director Kristen Chandler.

2019 MATH VIDEO CHALLENGE WINNERS

FIRST PLACE:

“Algenite” by Team Switcharoo Crew

Jordan Adeyemi, GA

Robert Hardy, GA

Naima Johnson, GA

Emily Ramirez, GA

▪ \$1,000 Scholarship each

FINALIST:

“Going Home” by RMSPG2018

Isaias Barrera, IL

Jamie Clemons Richardson, IL

Karol Lopez Valadez, IL

Johnny Sevilla, IL

FINALIST:

“Remainder” by The Remainders

Sanai Edwards, GA

Haley Jones, GA

Amari May, GA

Maia Pope, GA

FINALIST:

“#VI Strong” by BCB Blazers

Malik Francis, VI

Taragee Gumbs, VI

Gloria Lugo, VI

Ciara Rodney, VI

Mathletes Shoot for the Moon



Team New Jersey visits the Kennedy Space Center

Fifty years ago, the world's brightest minds in mathematics, science, technology and engineering worked together to achieve what had once seemed impossible: sending the first humans, American astronauts Neil A. Armstrong and Edwin "Buzz" Aldrin, to the moon.

The 2019 Raytheon MATHCOUNTS National Competition commemorated the anniversary of this remarkable milestone by celebrating the next generation of STEM thinkers. The 244 MATHCOUNTS national finalists are tomorrow's problem solvers who will tackle global challenges and accomplish feats we cannot yet even imagine.

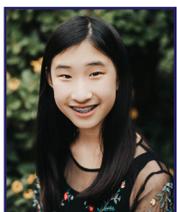
In honor of the "Moonshot" theme, many of our Mathletes shared their personal moonshot goals at the National Competition—the problems they aim to solve and the impossible feats they want to make possible.



"My moonshot goal is to combine math with creativity in a way to make it more accessible/less intimidating."
-Audrey Lim, NV



"I would like to investigate dying coral reefs to determine how to reverse their deterioration, even as the globe continues to warm."
-Eamon McGlashan, ME



"My moonshot goal is to eliminate things like the wage gap and pink taxes from the world."
-Joy An, WA



"I have a dream that one day I will discover and modify a species of bacteria that is able to break down plastic."
-Jerry Chen, PR

Meena Boppana Wins 2019 MATHCOUNTS Alumni Scholarship

Meena Boppana of Somerville, Mass. won the \$3,000 MATHCOUNTS Alumni Scholarship. Meena is a Harvard graduate who grew up in New York City. After participating in the MATHCOUNTS National Competition with the New York State Team, Meena made a goal to increase female participation in MATHCOUNTS. As a high school student, she started her own MATHCOUNTS team at Girls Prep in Lower Manhattan. Reflecting on this experience, Meena said, "I discovered a deep passion for teaching math, as well as for leveling the playing field in education by race, gender and income. The experience showed me that if I saw an injustice, I could take direct steps to be the change I wanted to see." After working as a software engineer for a few years, Meena decided to return to Harvard to earn a Master's in education and become a math teacher in the Boston Public School System.



Meena Boppana, 2019 MATHCOUNTS Alumni Scholarship Winner.



"I discovered a deep passion for teaching math, as well as for leveling the playing field in education by race, gender and income. The experience showed me that if I saw an injustice, I could take direct steps to be the change I wanted to see."

Left: Meena accepts the New York team's Spirit Award at the 2008 National Competition after convincing her teammates to sing and dance about math.

This year's applications were so impressive that for the first time, the MATHCOUNTS Foundation chose a scholarship runner-up. Karen Ge is a high school senior from Naperville, Ill. At 18, Karen already has become a MATHCOUNTS coach, founded her own non-profit tutoring organization and even published her own book about her MATHCOUNTS experiences. "Mathematics is woefully misconstrued in the public eye as a cold, unimaginative discipline when it is in reality a vibrant, ever-shifting patron deity of all social and intellectual progress. These lessons about mathematics, the communities it fosters, and about the character and morals that it inspires, are what MATHCOUNTS truly means to me," says Karen.



Karen Ge, 2019 MATHCOUNTS Alumni Scholarship Runner-up.

2019 FINALISTS

Annette Belleman, DD
Christina Bingham, ND
Jude Flynn, FL
Alexander Kalbach, PA
Arjun Krishna, AR
Isabella Mahal, CO
Erin Melton, WI
Prastik Mohanraj, CT
Anusha Murali, NH

Tyler Phung, NV
Annie Shen, WA
Sonal Sinha, MN
Collin Van Cuyk, WI
William Wang, KS
Lucy Ward, UT
Catherine Ye, NY
Saba Zerefa, AZ
Michelle Zhu, IN

**The application for the
2020 MATHCOUNTS Alumni
Scholarship will be available
in the fall at
mathcounts.org/scholarship**

Spotlight on State and Chapter Donors

We would like to express our gratitude to the outstanding donors at the state and chapter level whose generosity reached thousands of students attending chapter and state competitions this year. They helped make the 2018-2019 MATHCOUNTS Competitions Series a success!

Alabama

Raytheon Company

Alaska

Mary Borthwick
PDC Engineers

California

Google Inc.
Northrop Grumman

Florida

Atlantic Self Storage
HDR Engineering, Inc.
Johnson & Johnson Vision Care (VISTAKON)
RS&H
STEM2HUB
UNF School of Engineering
WWGay

Georgia

Bowman Consulting
Oasis Consulting Services
Prime Engineering, Inc.
Schnabel Engineering

Guam

Bank of Guam
Environmental Chemical Corporation
Hensel Phelps
Society of American Military Engineers—Guam Post

Hawaii

Bowers + Kubota Consulting
Covanta
Hawaii Society of Professional Engineers Educational
Foundation
Hawaiian Electric Company

Idaho

INL STEM Competition Grant
NASA Idaho Space Grant Consortium

Iowa

John Deere Dubuque Works

Maine

Maine School of Science and Mathematics

Maryland

Calvert County Public Schools
Southern Maryland Electric Cooperative

Massachusetts

Deerfield Academy
Massachusetts Society of Professional Engineers
Society of American Military Engineers Boston Post
The Bement School

Michigan

General Motors
Grand Valley State University—Padnos College of
Engineering and Computing

Minnesota

Bolton & Menk
Braun Intertec
Burns & McDonnell
Ecolab Foundation
Great River Energy
Minnesota Professional Engineers Foundation
Polar Semiconductor
Schott Foundation
Securian Financial Foundation
Xcel Energy Foundation

Nevada

Wood Rodgers



State and Chapter Donors (continued)

New Jersey

New Jersey Institute of Technology
Rutgers University—New Brunswick Math Department
Atul Shah, P.E.
Union County College

New Mexico

Sandia National Laboratories

New York

Margaret Boyd
D.E. Shaw & Co.
The Doty Family
New York Chapter, New York State Society of
Professional Engineers
UBS
Yext

Ohio

Columbus State Community College
IEEE, Toledo Section
Rudolph Libbe Group
The Robert E. Fellers & Leona L. Fellers
Foundation Trust
SSOE Group
The University of Toledo, College of Engineering

Oklahoma

American Fidelity Foundation
Diana Bittle
Northrop Grumman
Gaylon Pinc



Elizabeth Mamczarz (GU) before the Written Competition.

Oregon

Mentor, a Siemens Business
Oregon Chapter—American Public Works Association
Oregon Institute of Technology
Professional Engineers of Oregon
Trust Services Management, LLC

Pennsylvania

Gannon University
Larson Texts, Inc.

Rhode Island

Fidelity Investments

South Carolina

Aiken Technical College
Bridgestone Americas Tire Operations
Chapin Middle School
Marguerite McClam, P.E.

South Dakota

3M Aberdeen



Team Alaska performs its chant before the Written Competition.

State and Chapter Donors (continued)

Texas

Cockrell School of Engineering – University of Texas at Austin
Freese & Nichols
Professional Engineers in Private Practice, Bexar Chapter
Raytheon Company
Sid Richardson Foundation
Spurs Sports & Entertainment
St. Mary's University, School of Science, Engineering & Technology
Texas A&M University, College of Engineering
Texas Education Agency
Texas Instruments
Texas Society of Professional Engineers, Bexar Chapter
Texas Society of Professional Engineers, Preston Trail Chapter
Texas Tech University Edward E. Whitacre Jr. College of Engineering
University of Texas at Dallas
John P. and Darlene Wier

Utah

Mission Math Utah
Prahba LLC
Salt Lake Community College
Martheswaran Solamuthu

Vermont

PC Construction

Virginia

Association for Manufacturing Technology (AMT)
Comcast
Northrop Grumman

Washington

Microsoft Corporation
Spring Environmental, Inc.

Wisconsin

Acuity

Idaho coach Charles McAllister high-fives Jieming Mei before the Written Competition.



THANK YOU!

MATHCOUNTS would not be able to have an impact on thousands of students every year without the support of our individual and corporate donors.

National Sponsors

- Raytheon Company
- U.S. Department of Defense STEM
- Northrop Grumman Foundation
- National Society of Professional Engineers
- CNA Insurance
- 3Mgives
- Texas Instruments Incorporated
- Phillips 66
- Art of Problem Solving
- NextThought

Executive Sponsors

- Bentley Systems Incorporated
- General Motors

Official Sponsors

- National Council of Examiners for Engineering and Surveying
- The PwC Charitable Foundation, Inc.

Patron Sponsor

- BAE Systems, Inc.

Founding Sponsors

- National Society of Professional Engineers
- National Council of Teachers of Mathematics
- CNA Insurance

Raytheon

2019 MATHCOUNTS National Competition Sponsor

MATHCOUNTS®

Everyone has a
path to success in math.

Help us ensure all
children discover theirs.

mathcounts.org/donate

FOLLOW + SHARE + JOIN US!



mathcountsfoundation



MATHCOUNTS



MATHCOUNTSsnaps