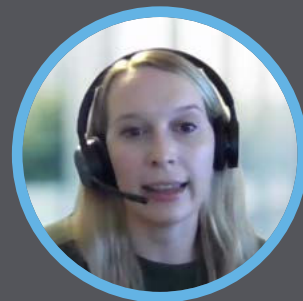




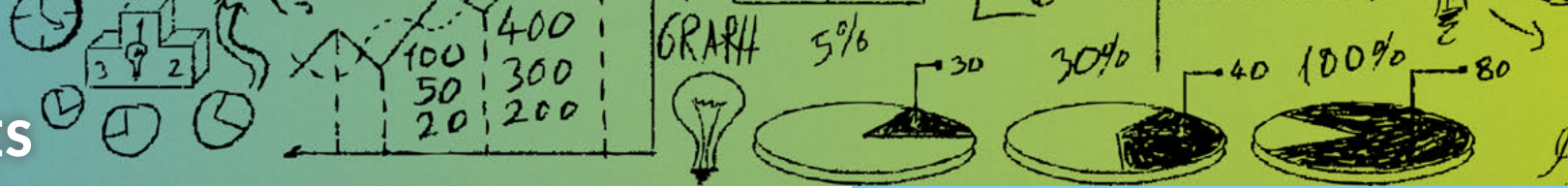
A Program of The Actuarial Foundation

Modeling the Future Challenge



WATCH OUT, WORLD...
THE ACTUARIES OF THE
FUTURE
ARE COMING

FY2023-2024 SPONSORSHIP OPPORTUNITIES



What is The Modeling the Future Challenge?

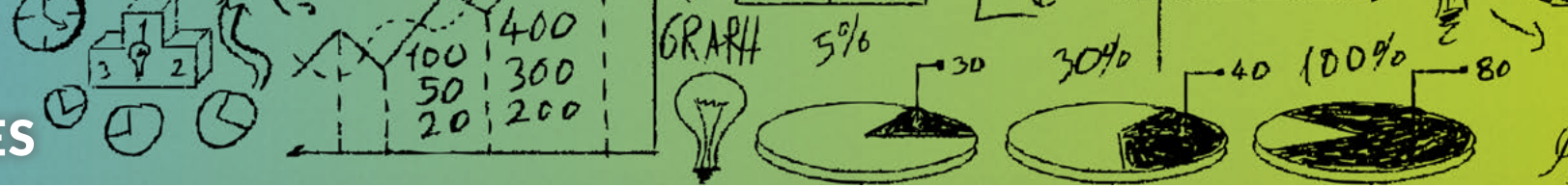


The Modeling the Future Challenge is a real-world competition for high school students combining math-modeling, data-analysis, and risk-management into one exciting competition! More than 1,000 students from across the country participate in the program each year, competing for up to \$60,000 in college scholarships.

To compete, teams of students conduct their own research project modeling real-world data to analyze risks and make recommendations to companies, industry groups, governments, or organizations to solve to solve local, national, and even global issues. Winning teams receive scholarship funds.

The students, their presentations, and their recommendations are impressive! Check out the titles of this year's finalists:

- The Barrier Between: Risk Analysis of Sea Level Rise in Boston
- More Than a Sunburn: An Analysis of Demographic and Geographic Characteristics on Melanoma Incidences
- An Analysis of Environmental Conditions and Factors on Drought Severity in California
- An Analysis of Severe Winds on Texas Counties' Annual Cotton Yields
- Effects of Copper Mining on Water Quality in Arizona
- Invisible Threats to Our Healthcare: Risk Analysis of Data Breaches in Healthcare Sector
- An Evaluation of Dryland Salinity in Australia
- KESSYM: A stochastic orbital debris model for evaluation of Kessler Syndrome risks and mitigations
- Dying at the Top: Death on Mount Everest
- The Grand Migration: Analysis of the Lobster Population Dynamics and its Financial Implications
- Breaking the Cycle: Reducing Recidivism in Iowa State Prisons
- Using Jet Engine Data to Produce More Economical and Efficient Maintenance Schedules
- Healthy Neighborhoods Louisville: Uncovering the Socioeconomic Drivers of Chronic Disease



What are people saying about the Modeling the Future Challenge?



Dominic Lee, The Maverick Actuary, Keynote Speaker for FY22-23 MTFC Symposium

“Yesterday, I was humbled to give the keynote address for the Modeling the Future Challenge. What stood out to me the most was the poise, polish, and sophistication of the contestant’s research. They threw everything but the kitchen sink at this modeling challenge, and made strategic recommendations to address the business problems they [identified].

It had me thinking, are they really still in high school?

Watch out world...

The actuaries of the future are coming.”



Channy Cornejo, Math Teacher, Santa Teresa High School, San Jose, CA

“I have managed to incorporate the challenge into my curriculum and turned it into a year-long project as we cover AP Statistics syllabus. This is an excellent way to incorporate real-world modeling and application of concepts learned in the classroom. The best part of this challenge is, we get to participate for free and an Actuary is assigned to each team to mentor them in their data analysis and writing the technical paper.”



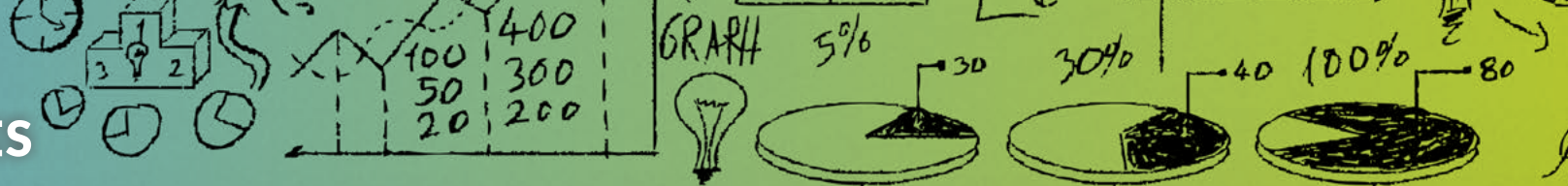
Zane Meraz, Volunteer Mentor and former Actuarial Diversity Scholarship Recipient

“The students were bright, ambitious, and full of energy! It was fun guiding them through math-based projects.”



See the students in action! Click the image...

FY2023-2024 SPONSORSHIP OPPORTUNITIES



Have direct contact with up to 1,000 high school juniors and seniors with strong math aptitude who will likely pursue STEM careers.

Share information about your company and actuarial team with an engaged audience of high school students and teachers.

Get your employees involved as volunteer mentors for student teams or judges for the competition.

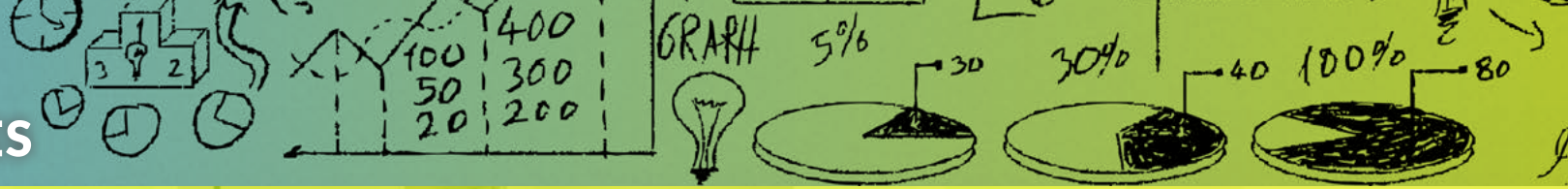
Help develop practice scenarios or example resources on topics like automobile insurance, agriculture, natural disasters, or other types of risk.

Participate in one of six regional workshops that provide an introduction to the Challenge and local university actuarial science programs.

Let's partner together!

Sponsors of the FY2023-2024 Modeling the Future Challenge will have the opportunity to:

National and Regional Sponsorship Opportunities Available. See additional benefits on page 8.



What Goes into The Modeling the Future Challenge?

Outreach

The Modeling the Future Challenge is getting noticed! Our outreach efforts include paid advertising, social media, and newsletters targeting high school students and teachers. Last year, more than 344,000 unique people were reached with 723,740 total ad impressions, and 12,500 unique website visitors.

EXPANDED!

Diversity

The Modeling the Future Challenge welcomes teams from public, charter, and private schools as well as from extracurricular organizations across the country. In FY22-23, more than one quarter of participants were from Title 1, underserved schools. Students completing the end of year program evaluation identified as nearly 60% Black, Asian or Native American, with 16% identifying as Hispanic/Latino. Gender representation is slightly higher for males (53%) than females (45%).

INCREASING!

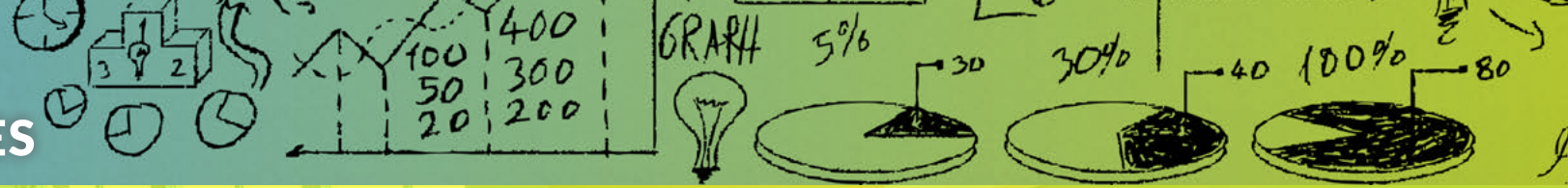
Mentorship

Mentors are integral part of the Challenge, helping teams hone in on the key issues within their topic, assisting students in locating the most useful sources of data and choosing appropriate mathematical models, and reviewing drafts of students' reports. The Mentorship Program is one of the most impactful resources within the Challenge. 81% of educators found the mentorship from actuaries to be Extremely or Very Beneficial. 87% of students stated that they Agree or Strongly Agree that their team's mentor was a great help during the MTFC.

CRITICAL!

Challenge Phase (Competitive)

Student teams compete in an initial Scenario Phase to ensure they have the math skills needed to compete in the Challenge, followed by a Project Phase where they examine their own topic areas, gather and model data, identify risks, and build their recommendations and presentations. An actuary is assigned to each team to give high-level actuarial guidance on their research project. The Challenge Phase culminates in the annual MTFC Symposium in Spring.



What Goes into The Modeling the Future Challenge?

NEW!

Quest Scenarios

The Quest Scenarios provide students with an expanded, guided process into actuarial science as the first phase of the competition. Enhanced scenarios provide 5 “Quest Missions,” each including 4 to 5 activities that guide students through the five steps of the Actuarial Process. These materials provide step-by-step introductions to common actuarial concepts and help teams of students understand how to structure a Modeling the Future Challenge project to be successful. Quest Scenarios are particularly useful for underserved students and classrooms who need additional support understanding the fundamental core concepts to launch their actuarial projects.

Teacher Training Program

The Actuarial Process training program is a virtual professional development program for mathematics and computer science educators across the United States. For the 2022-23 MTFC, educators accepted into the program received a \$300 stipend and were provided 13 hours (2022 training) or 15 hours (2023 training) of professional development including resources and support to help excite their students in real-world data analysis and mathematical modeling.

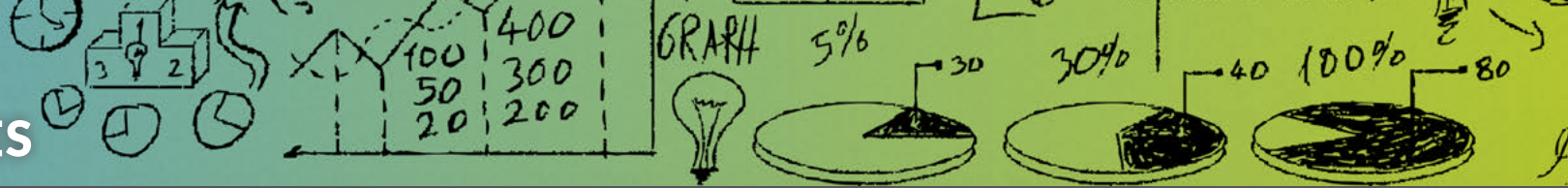
NEW!

Regional University Partners

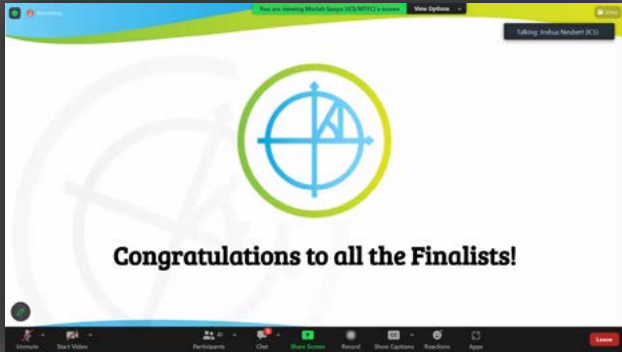
Last year, we launched the Regional University Partner Program, collaborating with colleges and universities across the United States to help high school students take the next steps in their mathematical careers. The University Partnerships create mutually beneficial activities that engage students on a local level in participating in the MTFC and learning more about related opportunities at the university.

Our FY23-24 Regional University Partners are:

Bentley University (Massachusetts) › Auburn University (Alabama) › California State University, Fullerton › Hofstra University (New York)
University of Maine at Farmington › Trine University (Indiana) › Iowa State University

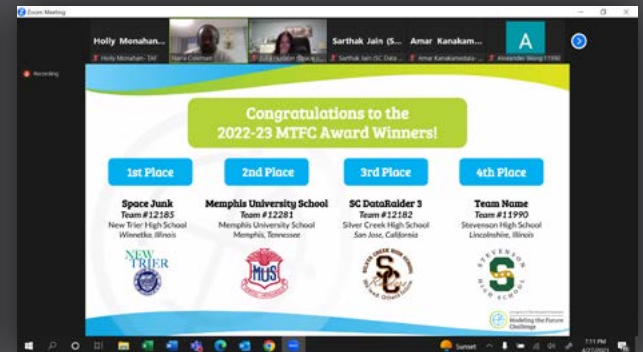
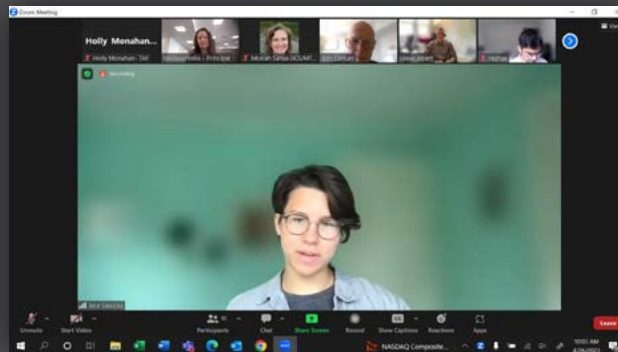
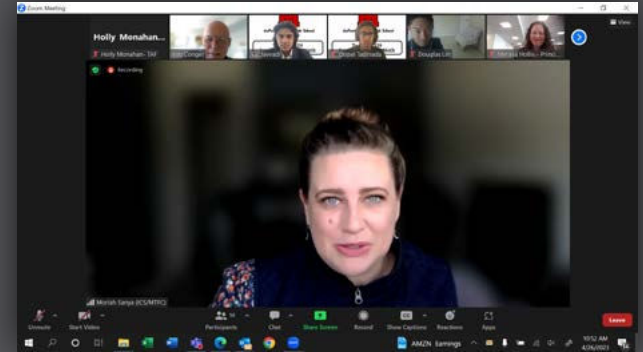


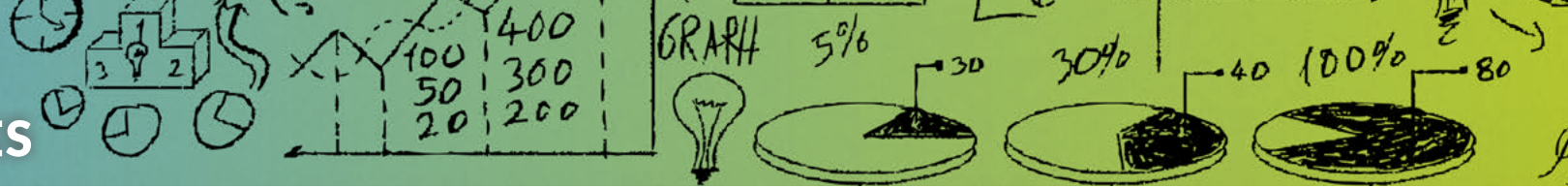
The Modeling the Future Challenge Symposium



The Modeling the Future Challenge Symposium is a one-of-a-kind event bringing together finalist high school teams and leading actuaries, scientists, and business leaders from across the industry for competition, learning and networking. The Symposium provides an immersive learning experience for students, giving them the opportunity to participate in career sessions, problem-solving activities, and other unique experiences created in partnership with the Foundation's corporate supporters and volunteers.

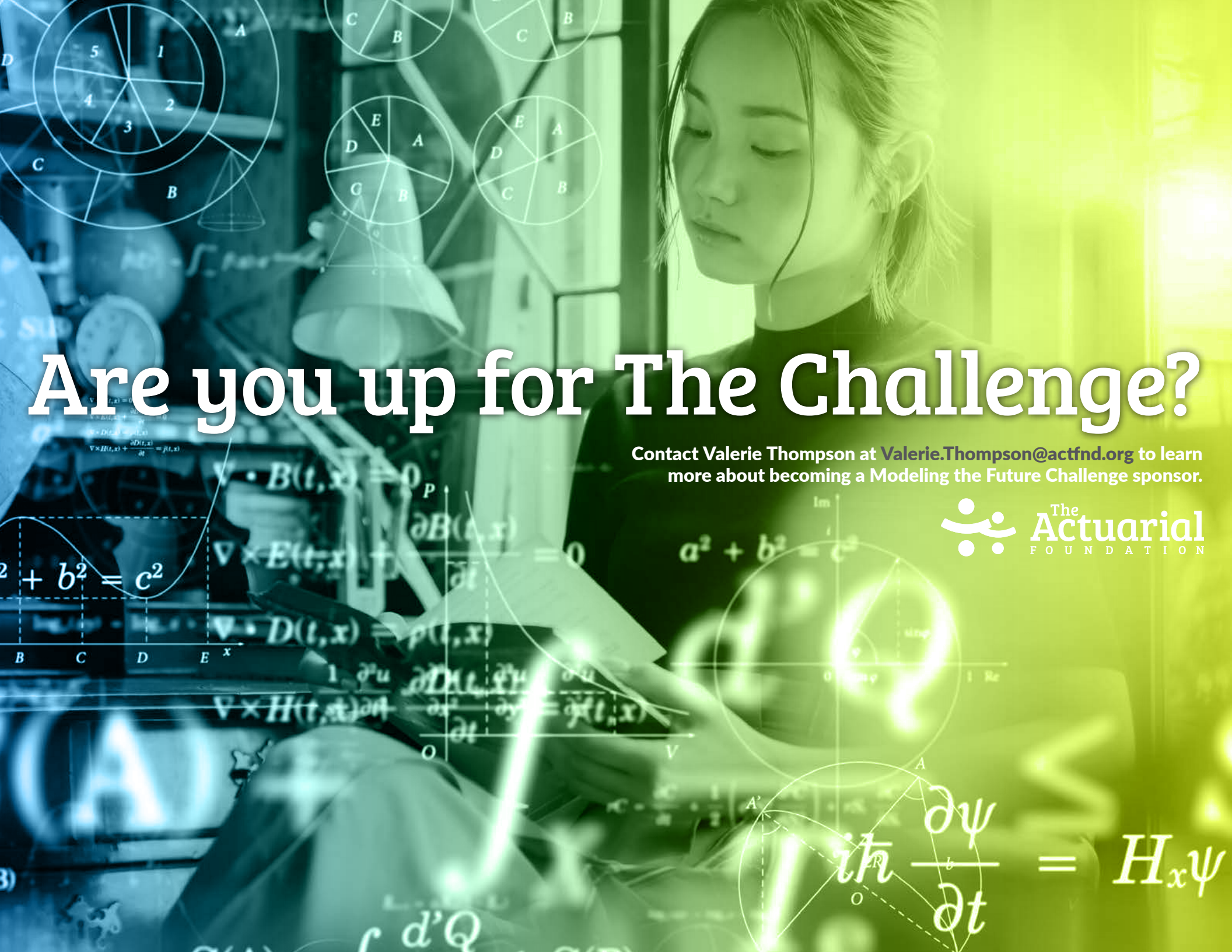
At its conclusion, four teams will walk away with college scholarships, but all of the participants will have an amazing experience that encourages them to continue pursuing mathematics, data science and research so that they can continue to "model the future."





Modeling the Future Challenge FY2023-2024 Sponsorship Levels

	Presenting Sponsor of Virtual Symposium \$100,000	Pioneer Level Sponsor \$50,000	Pathfinder Level Sponsor \$25,000	Pacesetter Level Sponsor \$10,000	Builder Level Sponsor \$7,500	Regional Level Sponsor \$5,000
Event name recognition: "(Your Company) Presents the Modeling the Future Challenge Symposium"	●					
Company featured in Finalist Announcement Webinar	●					
Opportunity to speak during Closing Ceremony when winners are announced	●					
Featured logo on finalist gifts or opportunity to provide a branded gift to finalists	●					
Logo on MTFC website and during Semi-finalist/Finalist Announcement Webinars, and the Virtual Symposium	●	●	●	●	●	●
Company featured in Semi-finalist Announcement Webinar		●				
Opportunity to host/participate in a live activity during the Virtual Symposium		●				
Opportunity to participate in a live activity at the virtual symposium	●	●	●			
Opportunity to participate in a MTFC webinar that reaches both students and teachers				●		
Logo on MTFC newsletter	●	●	●			
Social media recognition	●	●	●	●	●	
Opportunity to participate in Regional Workshop with students and teachers from your local area (where available)						●



Are you up for The Challenge?

Contact Valerie Thompson at Valerie.Thompson@actfnd.org to learn more about becoming a Modeling the Future Challenge sponsor.



$$a^2 + b^2 = c^2$$

$$\nabla \cdot B(t, x) = 0$$
$$\nabla \times E(t, x) + \frac{\partial B(t, x)}{\partial t} = 0$$

$$\nabla \cdot D(t, x) = \rho(t, x)$$

$$\nabla \times H(t, x) = \frac{\partial D(t, x)}{\partial t} + J(t, x)$$

$$i\hbar \frac{\partial \psi}{\partial t} = H_x \psi$$