



A Program of The Actuarial Foundation

## Modeling the Future Challenge

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#### **About The Actuarial Foundation**

The Actuarial Foundation, a 501(c)(3) organization, is the philanthropic institution of the industry in the United States. The mission of the Foundation is to enhance math education and financial literacy through the talents and resources of actuaries. The Foundation's vision is an educated public in pursuit of a secure financial future. For more information, please visit www.actuarialfoundation.org

### **About the Institute of Competition Sciences**

Since 2012, the Institute of Competition Sciences (ICS) has been defining best practices in competition strategy, design and operations. ICS aims to spark a new level of community engagement in science, technology and education by supporting a network of educational competitions. For more information, please visit www.competitionsciences.org

### Highlights from the Inaugural Year

52 Teams from all over the country participated in the 2017-2018 Modeling the Future Challenge.

"I'm pleased that The Actuarial Foundation has created an opportunity for students to see how mathematics, modeling, and their imagination can be applied to analyze major issues that affect society. Actuaries use these skills on a daily basis to serve the public. We hope that this competition will give students an incentive to continue to develop their mathematical skills and apply them for the public good."

-Roy Goldman, FSA, MAAA, CERA, Trustee of The Actuarial Foundation, Modeling the Future Challenge committee member, Gold Sponsor

"It really applies their math knowledge and math skills to a real-world problem, which is really important to future careers and to society."

-Jennie Hu, Coach, Team SixSigma Modelers- First Place Winners of the 2017 Modeling the Future Challenge "I'm a junior, so I still have some time to decide on a career, but I'll definitely consider being an actuary. I have more knowledge and can make a more educated decision now."

- Abhijit Gupta, Junior, Team SixSigma Modelers-First Place Winners of the 2017 Modeling the Future Challenge





### Challenge Activities

Each year a technology theme is selected in which students identify and characterize one way they think the technology will change the future. The 2018-2019 Modeling the Future (MTF) Challenge is structured into three phases of competition:

### Phase 1: Scenario Response

MTF will pose a set of business scenarios with existing data (real or created), that require simple mathematical modeling tasks and written responses to answer questions about the scenario. Teams that pass a strict rubric will be recognized as Modeling the Future Challenge semi-finalists, and will move on to phase 2 of the competition.

#### **Phase 2: Preliminary Report**

Semi-finalist teams will select an area in which they think the technology theme for the year (for example, the 2017 theme was "Autonomous Vehicles") will change the future. Teams must then identify and analyze data that helps them mathematically model and characterize the expected change. To support semi-finalist Teams in creating successful reports, each team will be paired up with an actuarial mentor who will meet (virtually) with the teams for two 1-hour sessions and help guide the students in coming up with their topic of change, data sets and mathematical models. Teams' written reports will be reviewed by a panel of actuarial fellows to select Modeling the Future finalists.

#### **Phase 3: Final Presentations**

All Finalist teams will attend the Modeling the Future Symposium and present their work live in front of a panel of expert actuarial judges. Judges will review teams' final reports and presentations to select the MTF Challenge's "Actuarial Scholars" who will receive the final scholarship awards.



### Corporate Sponsorship

The Modeling the Future Challenge offers a comprehensive sponsorship program to provide companies with an effective and convenient way to gain maximum exposure as the competition is promoted to 400,000 teachers and their students nationwide. Early sponsorship commitments will garner brand recognition throughout the competition period (April 2018 – April 2019), including initial outreach, team registration, a three-phased math modeling challenge, and the final awards symposium. Recognition and benefits can also be tailored to fit your company's needs.

Benefits:	Founding Sponsor \$125,000+	National Sponsor \$50,000	Executive Sponsor \$25,000	Team Sponsor \$10,000
Limit to number of sponsorships accepted at this level	1	2	3	4
Title Branding Rights	•			
Top Tier, non-exclusive branding		•		
Second Tier, non-exclusive branding			•	
Third Tier, non-exclusive branding				•
Award Presentation Opportunities	•	•		
Named Scholarships	•	•		
Judge Committee Opportunities	•	•	•	
Brand Recognition on All Materials	•	•	•	•



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### **Educational Sponsorship**

Your college or university can be prominently featured during each component of the Modeling the Future Challenge of your choice, including early challenge scenario tasks, student mentoring throughout the competition, and final symposium events. Early sponsorship commitments will garner brand recognition throughout the competition period (April 2018 – April 2019), and your institution will gain maximum exposure as the competition is promoted to 400,000 teachers and their students nationwide.

Benefits:	Scenario Sponsor \$10,000	Finalist Sponsor \$5,000	Event Sponsor \$2,500
Limit to number of sponsorships accepted at this level	4	6	4
Scenario Branding Rights (1 of 4)	•		
Scenario Theme Choice (1 of 4)	•		
Mentorship Role with Participating Students	•	•	
Branding Rights to Final Symposium Welcome Package		•	
Title Branding Rights to Choice of:  Opening Reception for Finalists  Outing for Finalist Teams  Luncheon for Award Judges  Awards Dinner			•



Modeling the Future Challenge

### **Invitation to Sponsor**

The 2018-2019 Modeling the Future Challenge will launch the second annual competition for high school students across the nation to create the best mathematical models projecting how future technologies could change industry, actuarial science, and society at large. Students will research emerging industries, learn from leading businesses, and consult with real actuaries to conduct detailed analyses of future impact. Please join The Actuarial Foundation as a sponsor of the Modeling the Future Challenge to help inspire the next generation and demonstrate the real-world power of mathematics, data analytics, science, and critical thinking. Early sponsorship commitments will garner brand recognition throughout the competition period (April 2018 – April 2019), including initial outreach, team registration, a three-phased math modeling challenge, and the final national awards symposium.

### Lifelong Benefits to Students and Teachers

In addition to award and scholarship opportunities for students, the Modeling the Future Challenge also supports educators in helping students connect mathematics and data science to real-world careers. By making math engaging and demonstrating its power to open new opportunities, Modeling the Future helps educators inspire and motivate students to want to learn more about these topics. To achieve its goals, the Challenge provides development opportunities to both students and educators.

#### **Educator Development Activities**

- Online webinars
- Industry mentorship
- Actuarial toolsets
- Best-practice guides for Challenge-based learning
- Educator grants

### **Student Support Activities**

- Actuarial, industry, and university mentorship
- Scholarships and awards
- Scenario practice prior to final Challenge reports
- In-person final presentation to industry experts
- National recognition



# Special Award Sponsorship Opportunities

Sponsors of the Modeling the Future Challenge may also work with The Actuarial Foundation to design special awards for participating students. Custom designed sponsorship packages can be arranged to highlight unique capabilities or achievements of the students that are specifically relevant to your company or educational institution.

### **Examples include but are not limited to:**

- Regionally-themed approaches to encourage and support schools in your geographic focus area.
- Impact awards for teams that innovatively project impact on your specific industry, focused either on a developing technology or an actuarial field.
- Best correlation awards for teams that make thought-provoking mathematical connections while modeling future trends.

