

Message from the Chair



Clark Slipper

Dear Friends of the Foundation,

It is my honor to serve as Chair of The Actuarial Foundation as we celebrate our 25th Anniversary. Twenty-five years is quite a milestone. To be

precise, it is 9,131 days, 219,150 hours and 13,149,000 minutes! When you look at it like that, it is quite impressive and certainly something to celebrate. I don't think any of us could have predicted all that we could achieve by applying actuarial expertise to serve the public good. Below are just a few examples of our accomplishments since The Actuarial Foundation opened its doors in 1994.

- 15 million students have used our free middle school math education resources
- 350,000 high school students and 14,000 teachers have benefitted from the *Building Your Future* financial literacy curriculum
- 565 college students have received a Foundation scholarship
- Since 2009, recipients of the Actuarial Diversity Scholarship have passed 582 exams

Our newer programs - the Math Motivators tutoring program and the Modeling the Future Challenge, are quickly making an impact as well.

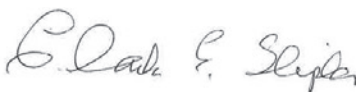
- Math Motivators is now in 7 cities and serving nearly 500 students across the U.S.

- As of the end of 2018, over 600 Math Motivator volunteers donated over 1,000 hours of free tutoring
- The Modeling the Future Challenge, our national math competition, awards \$55,000 in scholarships to high school juniors and seniors
- The 2018-2019 Modeling the Future Challenge had 220 teams and nearly 1,000 high school students participate

I had the privilege of attending the recent Modeling the Future Symposium in Chicago and was amazed by the caliber of these students and their presentations. There was a tangible excitement throughout the event and a resounding sense of security for a bright future with these students emerging as tomorrow's leaders. Seeing one of our programs in action made me extremely proud to be an actuary and to be associated with the Foundation. I saw firsthand how the work of the Foundation is enhancing the profile of the profession while preparing today's students to be tomorrow's leaders.

All of the Foundation's successes these past 25 years are only possible because of the steadfast generosity of our individual and corporate donors, our supporting organizations, our Board of Trustees and our staff. Thank you for making The Actuarial Foundation's first 25 years such a resounding success. I am excited to work with you as we continue to expand our reach and ensure that our Foundation continues to benefit the public and the actuarial profession for years to come.

Sincerely,



Clark Slipper, FSA, MAAA

Calendar of Events

June 24-26, 2019
SOA Health Meeting
Phoenix, AZ

July 10-11, 2019
The Actuarial Foundation
Board of Trustees Meeting
Rosemont, IL

August 1-3, 2019
IABA Annual Meeting
Houston, TX

August 9-10, 2019
ASPPA Symposium
Chicago, IL



Our heartfelt thanks to
all of our contributors
and volunteers for
twenty-five years of
making the programs of
The Actuarial Foundation
a success!

Thank you!

Changing Lives with Math Education

EDUCATION

A Successful Second Modeling the Future Challenge

Modeling the Future Challenge Symposium

April 11 and 12, 2019

The second annual Modeling the Future Challenge was a huge success. A total of 191 teams including 873 high school junior and senior students participated this year, with student teams working to develop mathematical models of how future cures or treatments for diseases may affect our lives. The teams embraced the Challenge and prepared projects on renal denervation as a treatment for resistant hypertension, CAR-T cell therapy as an emerging treatment for blood cancers and how the bioartificial kidney could impact kidney disease. Their work was tremendous, and all the 2019 participants are to be congratulated for their efforts.

The Challenge culminated in a Symposium in Chicago on April 11 and 12, where the nine semi-finalist teams presented their final papers to a panel of actuarial judges. Clinching first place and receiving a \$25,000 scholarship were Rushil Arora, Karina Halevy, Joshua Hejna, Shaun Huang and Maxwell Liu from Los Altos High School in Los Altos, California. These students did their project on Stem Cell Therapy for Type 2 Diabetes. Coming in second place and



The first place team from Los Altos High School with Roy Goldman, FSA, MAAA, CERA

winning the \$15,000 scholarship award were Nikhil Brahmapuram, Henry Coates, Russell Graviat, Jr., Madoc Kimball and Shivani Kundalia from Maggie Walker Governor's School in Richmond, Virginia. The third-place scholarship award of \$10,000 went to Thomas Blue, Derek Chen, Nicolas Ferree, Mary Caroline Heinen and Ryan Kaplan from Maggie Walker Governor's School in Richmond, Virginia. The fourth-place scholarship award of \$5,000 went to Rebecca Heidt from Waukee APEX in Waukee, Iowa. Students from each winning team will share the scholarship awards, which will be sent to the colleges of their choice.

Other highlights from the Symposium included the "Ask an Actuary" session on Thursday afternoon, which gave students a chance to visit with actuaries from Allstate and Ernst & Young. Dinner on Thursday night was followed by an engaging presentation on the changing role of an actuary in health care by Sara Teppema, FSA, MAAA and Joe Wurzburger, FSA, MAAA. On Friday morning, students, coaches and parents were treated

to a breakfast presentation by Brock Reeve, MPhil, MBA, Executive Director of the Harvard Stem Cell Institute, on the costs associated with using Stem Cells as tools and therapies in the future. These opportunities to connect with and hear from actuaries and business professionals about their work and math-related career options were invaluable to students.

The Modeling the Future Challenge was made possible with the generous support of Founding Sponsor Roy and Georgia Goldman, Executive Sponsor Lincoln Financial Group, Champion Sponsor RGA, Event Sponsor Rick and Beth Jones and Educator Grants Sponsor John Hanson Family Foundation. We are grateful to these sponsors and to everyone who participated in Modeling the Future Challenge and the Symposium. Your support makes this national scholarship competition aimed at introducing the actuarial profession to high school students possible. We look forward to our third annual Challenge next year!



Students connect with actuaries at the "Ask An Actuary" session



Sara Teppema, FSA, MAAA and Joe Wurzburger, FSA, MAAA present at dinner on Thursday night.



Brock Reeve, MPhil, MBA, addresses students on Friday morning.

John Hanson Memorial Educator Math Grants

As part of the 2018-2019 Modeling the Future Challenge, the Foundation provided five Educator Math Grants to teachers using the Challenge as part of their STEM curriculum. The winning teachers completed an application demonstrating how they would use the grant to help their students connect with STEM, particularly mathematics, using the Modeling the Future Challenge. Grant funds could be used for classroom materials and supplies, student trips to educational facilities and organizations, or student trips to meet with industry partners or mentors associated with the Modeling the Future Challenge.

Teachers selected for the grant were also required to register two or more student teams and work with them to submit an entry in the 2018-2019 Modeling the Future Challenge. Grant recipient Nikki Kennedy, from the Arkansas School for Mathematics, Sciences and the Arts in Hot Springs, Arkansas, shared this quote from one of her students, "The Modeling the Future Challenge helped my team and I work together to learn about statistical analysis and reasoning. This Challenge helped us learn how to communicate our thoughts in a professional way through essays with mathematical reasoning. Along with this, we



Nikki Kennedy

learned many useful skills in Excel and other programs."

The John Hanson Memorial Prize was established in 1985 by members of the Conference Board and members of the Conference of Consulting Actuaries to recognize Hanson's contributions to actuarial literature. A long-time treasurer of the Conference, Hanson's papers on pension funding and accounting set the standard for this important topic. In 2017, The Actuarial Foundation and The John Hanson Family Foundation established the new John Hanson Memorial Educator Math Grants annually awarded as part of the Foundation's Modeling the Future Challenge national math competition.

The Hardest Math Problem Student Contest

Winners of The Hardest Math Problem, a national middle school math competition, were recently announced. The contest, designed to help students practice critical thinking supported by accurate computation, is the Foundation's latest collaboration with Scholastic, the global children's publishing, education and media company. Competing for a chance to win a \$5,000 grand prize, students in sixth, seventh and eighth grades completed extra challenging story problems combining reasoning skills with math. Grand prize winners receive a \$5,000 deposit to a 529 savings plan and a laptop. First-place winners receive a tablet. Winning teachers from each grade receive a \$500 gift card.

Winners were required to complete an initial challenge to qualify for Challenge Two and the grand prize. Over 7,000 students entered

the first challenge and over 1,000 students submitted entries to Challenge Two. From those correct submissions, sixth grader Vedanti J. from Daniel Wright Junior High School in Lincolnshire, Illinois was selected as the grand prize winner. Jacqueline R., a sixth grader from Norwood Creek Elementary in San Jose, California, won the first-place prize. Laasya N. from John F. Kennedy Middle School in Plainfield, Illinois was the seventh-grade grand prize winner. Claire M. from St. William the Abbot School in Seaford, New York won the seventh-grade first place prize. The winner of the grand prize for eighth grade was Alexandra C. from Dartmouth Middle School in Dartmouth, Massachusetts and the first prize winner was Max B. from Carrington High School in Carrington, North Dakota.

The Hardest Math Problem student contest was judged by a team of actuaries who evaluated students' answers on how well they communicated their mathematical argument, their mathematical precision and their attention to detail. One of the judges, Brian Donlan, FCAS, MAAA, Trustee of The Actuarial Foundation, noted, "With thousands of students participating in the program from across the country, The Hardest Math Problem had a remarkable first year. As an actuary involved in selecting the winners, I was very impressed with the clear communication of mathematical arguments for these incredibly challenging problems."



Math Motivators Update

Since its beginning in Hartford, Connecticut and Chicago, IL, the Math Motivators tutoring program has expanded to Seattle, WA, Minneapolis/St Paul, MN, New York City, Lincoln, NE, and Portland, ME. Our aim is to continue grow Math Motivators from seven cities to more than 15 cities, including Springfield, MA, Boston, MA, Des Moines, IA, Omaha, NE, Tampa, FL, Milwaukee, WI, Salt Lake City, UT, Pittsburgh, PA, Baltimore, MD, and Washington, D.C. Our expansion plans for the program are outlined in the map at the right.

We've also increased the number of volunteer tutors from 200 to almost 1,000. We've gone from helping 310 students in 6 high schools to more than 700 students in 20 middle schools and high schools. We also want to increase our volunteer base to 3,000. Most importantly, we want to give more than 1,000 students access to tutoring to improve their math skills and introduce them to the actuarial profession.



Blue = Original Cities

Orange = Future Cities

Green = Existing Cities

Welcome to the Foundation's New Trustees

Beginning on January 1, 2019, a distinguished group of new Board of Trustee volunteers began their three-year terms with The Actuarial Foundation. We are honored to have them supporting the efforts of the Foundation.



Jeremy Engdahl-Johnson

Director of Media Relations
and Public Affairs - Milliman

"For 25 years, The Actuarial Foundation has sought to enhance math education and financial literacy. We've got a great story and I'm looking forward to helping the Foundation tell that story more broadly."



Nadine Orloff, FSA, EA, MAAA, FCA

Senior Director, Retirement
Willis Towers Watson

"I am honored to be asked to serve as a Trustee of The Actuarial Foundation on this, its 25th Anniversary year. I look forward to working with the Foundation to promote lifelong math education and financial literacy."



Sharon Robinson, FCAS, MAAA

Chief Pricing Actuary
Zurich North America

"I am honored to serve on The Actuarial Foundation's Board of Trustees. I have benefitted greatly from the math education I received and I value every opportunity to give back in support of others in this area. The Actuarial Foundation's programming is impacting students in so many positive ways. I look forward to being part of this work."

Emeritus Trustee Makes Lasting Gift to the Foundation

When Dorn Swerdlin, FSA, MAAA, MSPA, FCA, EA joined the Foundation's Board of Trustees in 2009, he had a passion to enhance the image of the actuary and was drawn to the Foundation's commitment to serving communities. He worked with Dan McCarthy serving on an SOA Strategic Planning Committee. When McCarthy became Chair of The Actuarial Foundation, he invited Swerdlin to join the Board of Trustees. The Foundation had recently launched the *Building Your Future* financial literacy curriculum and as Swerdlin puts it, "I really liked what the Foundation was doing to help people learn about financial literacy and offering teachers free materials. It was rewarding to read grateful responses from teachers who had received these materials."

He first heard of actuarial science from a fraternal brother at Georgia Tech who told him about the actuarial exam. Once he learned more about it, he was hooked. After completing exams, he went on to start Swerdlin & Company, a retirement planning firm where Dorn specialized in client relations, strategic planning and new business development. He had planned to leave a legacy gift to the Foundation as part of his will, but he decided to make the gift last year when he sold his company. "I wanted to do something for the profession and I hope the Foundation is able to continue the good work it's doing with financial literacy. It's great for the profession and great for the public."

We are beyond grateful to Dorn Swerdlin – his amazing commitment to the Foundation and to the actuarial profession has definitely enhanced the image of the actuary!

Welcome, Emeritus Trustees

At the March Board Meeting, the following individuals joined the Foundation's distinguished group of Emeritus Trustees.

- **Pamela Cone**
- **A. Greig Woodring, FSA, MAAA**

In Memory

The Foundation received many 2018 gifts in remembrance of the following individuals. Our thoughts are with their family, friends and colleagues.

Thomas Barnham III, FSA, FCA, MSPA
David G. Fitzpatrick, FSA
Mary Simon
John Stiglich, ASA
Edward (Ted) Stone, FCAS

In Honor

The Foundation received many 2018 gifts in honor of the following individuals.

Sheldon Baker
Paul Braithwaite, FCAS, MAAA
and Nancy Braithwaite, FCAS, MAAA
John Ehrhardt, FSA, EA, MAAA

25th Anniversary Comprehensive Campaign

We're excited to share that our 25th Anniversary Comprehensive Campaign is already underway. The active phase will occur over nine-months with a five-year pledge redemption period to allow for the fulfillment of commitments. Our current focus is on recruiting our campaign teams and producing our communication materials. In the coming months, we will begin the process of reaching out to key benefactors to arrange personal visits to ask for support. Since email contact is a common and successful practice in our profession, we will contact other prospective donors through multiple email appeals.

The Foundation Receives Funding from Two Grants

The New York Life Foundation and Milliman, Inc. have pledged their support of Foundation programs with major grants. The New York Life Foundation has made a three-year, \$300,000 pledge supporting the Hardest Math Problem Student Contest and the Math Motivators tutoring program. A three-year \$750,000 gift from Milliman, Inc. supports the Math Motivators tutoring program. Milliman's donation was made possible by the Milliman Giving Fund and was raised entirely through donations from employees and alumni.

Save the Date for the Foundation's 25th Anniversary Luncheon

The Foundation will celebrate 25 years with a luncheon at the Society of Actuaries Annual Meeting. The luncheon will be held on Monday, October 28 at the Toronto Convention Center. We are excited to announce that Dr. Talithia Williams will be our guest speaker. A host of the PBS series, NOVA Wonders, Dr. Williams is an innovative professor, popular TED speaker, inspiring author and passionate advocate for STEM education. Save the date for what promises to be an insightful presentation and exciting celebration!



Dr. Talithia Williams

Thank You, Steve Lowe and Casualty Actuarial Society

The Foundation is beyond grateful to Steve Lowe and members of the Casualty Actuarial Society for their participation in the 100 Donors in December Challenge. The ingenuity and competitive spirit of Steve and CAS members resulted in 157 donors, including 47 new donors, and raised over \$68,000 for the Foundation.



SOA Math Motivators Matching Gift Campaign Continued for a Second Year

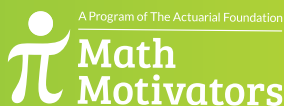
Your support has made the continuous growth of the Math Motivators tutoring program possible. If you're a member of the Society of Actuaries (SOA), your donation to Math Motivators goes twice as far as the SOA is once again generously matching its members' donations to the Math Motivators tutoring program, up to US\$62,500. Make your donation today at mathmotivators.org

Students
Tutors
+ Donations

Math Motivators

Double the impact of your donation to The Actuarial Foundation and help the Math Motivators program expand to more schools and communities across the country.

With your support,
it all adds up.



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Donate today at
mathmotivators.org



SUPPORTING U.S. ACTUARIAL ORGANIZATIONS



Changing Lives with Math Education

Corporate partnerships help the Foundation develop math education and financial literacy resources and fund scholarships to change lives and promote lifelong math education. Thanks to all of the organizations below whose support makes our work possible.

Corporate Sponsors 2018-2019

Visionary - \$500,000+

Milliman

Innovator - \$250,000+

New York Life
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Pioneer - \$50,000+

Lincoln Financial Group
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Pathfinder - \$25,000+

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Actuarial Society of Greater New York
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Advocate - \$1,000+

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475 N. Martingale Road #600
Schaumburg, IL 60173-2226

Phone: 847-706-3535

Fax: 847-706-3599

Web: www.ActuarialFoundation.org

STAFF

Jason Leppin, CFRE
Executive Director
[Email: jason.leppin@actfnd.org](mailto:jason.leppin@actfnd.org)

Kelly Gschwend
Program Manager
[Email: kelly.gschwend@actfnd.org](mailto:kelly.gschwend@actfnd.org)

Laura Hogan
Database and Office Specialist
[Email: laura.hogan@actfnd.org](mailto:laura.hogan@actfnd.org)

Debbie McCormac
Senior Program Specialist
[Email: debbie.mccormac@actfnd.org](mailto:debbie.mccormac@actfnd.org)

Holly Monahan
Marketing & Communications Specialist
[Email: holly.monahan@actfnd.org](mailto:holly.monahan@actfnd.org)

Wendy Moylan
Foundation & Corporate Relations
Manager
[Email: wendy.moylan@actfnd.org](mailto:wendy.moylan@actfnd.org)

Aaren Myers
Program Specialist
[Email: aaren.myers@actfnd.org](mailto:aaren.myers@actfnd.org)

The Actuarial Foundation

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