



Newsletter

Chairman's Message

Dear Friends of the Foundation:

As I approach the midpoint of my first year as chairman of The Actuarial Foundation, I am pleased to observe that our



Frederick J. Sievert

programmatic activity continues to expand and the visibility and impact of our efforts — thanks to our individual donors, corporate donors and sponsoring organizations — is being increasingly noticed and recognized throughout the actuarial community and elsewhere in our industry.

A wealth of support and encouragement has been evident through our presentations and conference calls with the leaders of all five of the supporting actuarial organizations. The Foundation is succeeding in carrying out its mission in the three program areas: Youth Education, Consumer Education and Research. Our math mentoring programs continue to be our flagship effort involving hundreds of actuarial volunteers. Our expanded distribution of educational materials through the Scholastic organization, and our selected corporate partners for consumer distribution, allow us to reach, impact and educate millions of students and adults. Research continues to provide valuable education for our profession and for consumers.

As we continue to live our mission, we are frequently reminded of what initially raised our awareness and our concern for math education and literacy needs across our country. The press continues to be flooded with articles about recent studies that repeatedly demonstrate and conclude that the United States has lost its edge in

mathematics and science education. Headlines, like the following, can be found in newspapers and magazines across the nation:

"Top Achieving Nations Beat U.S. States in Math and Science"
Education Week, Nov. 13, 2007

"U.S. Teens Trail Peers Around World on Math-Science Test"
Washington Post, Dec. 5, 2007

"Math Scores Disappoint"
The Times, Feb. 28, 2008

I feel it's important to reference the study by the **Trends in International Mathematics and Science Study (TIMSS)** which emphasizes the importance in reaching as many young students as possible. Results from that study indicated that of the 400,000 fourth and eighth grade students in 29 industrialized countries around the globe, U.S. students ranked 24th out of 29 in math/science competencies.

The Foundation's programs are designed to bolster math competencies and we are hopeful that they are having a significant and growing impact on the students we reach thanks in large part to our volunteer members who make these programs come alive in classrooms all over the country whether it's through mentoring or lending their mathematical expertise in program development.

Our relationship with Scholastic has certainly been a rewarding one. It has now been extended through 2010 — that said, we will have a total of five turnkey classroom modules for use by educators around the country in our library of math-related educational materials. In addition, we are embarking upon a new financial literacy series geared toward high school

students that we intend to market and launch early in 2009.

You can take comfort that your Foundation contributions are being used well to address one of the most important and visible educational needs in the United States as we attempt to compete in a global economy. The year is only half over. We have many successes worth celebrating and many more projects yet to undertake with regard to the academic well-being of our nation's youth. The Actuarial Foundation trustees are pleased to be guiding our profession in this very important effort.

Sincerely,

Frederick J. Sievert, FSA, MAAA
Chairman

Back by Popular Demand

Stack the Odds in Favor of Students ...



Actuarial Foundation Charity Event

see page 5

**The City of Milwaukee commends
The Actuarial Foundation for its
service to James Whitcomb Riley
Elementary School.**



"I, Tom Barrett, Mayor of the City of Milwaukee, do hereby proclaim Tuesday, April 22, 2008 to be James Whitcomb Riley Actuarial Day throughout the City of Milwaukee."

Board Update

The Board of Trustees met in New York City for their summer meeting on July 15, 2008. Highlights of that meeting include:

- As a follow-up to the Governance workshop held at the March meeting, a task force was formed to review outcomes from that meeting. The findings from the Task Force were reported and it was determined that further focus on topics covering fundraising/advocacy; evaluation/measurement; strategic practice; branding and awareness will be addressed by reporting committees. A Governance Committee will evaluate strategic practices, organizational structure; committee terms and role and responsibilities of the Trustee.
- New Scholarship comes to the Foundation! The CAS/SOA Diversity Scholarship has been moved to the Foundation beginning with 2009 awards. More information will come to you as the process unfolds.

- We are pleased to announce Trustee election results for terms beginning in 2009: They are: Craig Baldwin, FSA, MAAA; Bob Beuerlein, FSA, CERA, FCA, MAAA; Paul Braithwaite, FCAS, MAAA; Curtis Hamilton, MSPA, EA, MAAA; Kathy Olcese, FCAS, MAAA; Arthur Panighetti, FSA, MAAA; Dorn Swerdlin, MSPA, EA, FSA, FCA, MAAA. Dave Cummings and Harold Skipper were reelected to a 2nd term. Special recognition to Norm Crowder and Jim MacGinnitie as our newest Emeritus Trustees.
- The annual audit report was presented. Auditors reported a clean audit with no difficulties or concerns to report while performing the audit. The audit was completed by the auditing firm of VirchowKrause & Company.
- Each program area reported on current activities. Please see program area highlights in each issue of the Newsletter.
- The next Board of Trustees meeting is November 12, 2008 in Rosemont, IL.



Calendar of Events

September 18-19, 2008
CAS Loss Reserve Seminar
Foundation Charity Event
Washington, DC

October 19-22, 2008
ASPPA Annual Meeting
Washington, DC

October 19-22, 2008
SOA Annual Meeting
Foundation Charity Event
Orlando, FL

October 26-29, 2008
CCA Annual Meeting
Bonita Springs, FL

October 27, 2008
AAA Annual Meeting
Bonita Springs, FL

November 12, 2008
The Actuarial Foundation
Board of Trustees Meeting
Rosemont, IL

November 16-19, 2008
CAS Annual Meeting
Seattle, WA

Rocking Middle Schoolers with ‘Conversions’

The Conversions are a fictional rock band of middle school-age kids with a knack for numbers that's helping them navigate their way to stardom. They are the stars of *Conversions Rock*, the theme of the Actuarial Foundation's latest youth education program due to hit middle schools across the nation in October.

Conversions Rock builds on the success of the two previous Actuarial Foundation youth education programs, *Bars, Lines & Pies* and *Shake, Rattle & Roll*. These turnkey programs, developed with education publisher Scholastic, are designed to get students interested in math by applying math tools to real-world scenarios. Actuaries contribute to and oversee development of math applications used in the program. The Foundation funds the program and Scholastic distributes the user-friendly lesson plans, work sheets and other materials to middle school teachers across the country. The

goal is to get kids interested in math, to improve math literacy and attract more students to math careers; actuarial science is the primary focus.

The Actuarial Foundation sponsors the program and recruits volunteer actuaries to teach the lessons in their local schools. *Conversions Rock* helps students build on math skills through exciting examples of how to convert fractions into decimals and percents and vice versa. Using fractions, Conversions guitarist Nikki figures the split of the CD proceeds equally among the band members. Dezy, the



drummer, uses decimals to figure out band logistics and answer travel questions. And lead singer Bailey helps the band budget its money. Each exercise is designed to ignite the interest of kids in grades six to eight.

In *Bars, Lines & Pies*, students in grades four to six learned how graphing skills can help predict trash generation and recycling outcomes. *Shake, Rattle & Roll*, which teaches how probabilities are used to

assess the impact of natural disasters, reached more than 38,000 middle school

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Together, We are Making an Impact

YOUTH EDUCATION

We're inspiring a new generation of math-skilled thinkers.

STUDENTS ARE HEADING BACK TO SCHOOL – LET'S JOIN THEM!

Advancing Student Achievement

programs are gearing up for the new school year and will be ready to welcome new faces to their programs. Now is the time to consider volunteering in an ASA program in your area. Give students something they will value forever — the importance of mathematics in life! Create the kind of excitement that really inspires a student to learn, understand and achieve. From the excitement of watching a student's eyes light up when they finally grasp a concept they've been trying to understand, to the satisfaction of seeing a school's math scores improve, participating in this program could very well change your life too. To see a listing of ASA programs across the country go to: http://www.actuarialfoundation.org/youth/call_for_mentors.htm

Hear what other actuaries involved in mentoring have to say at:

<http://www.actuarialfoundation.org/youth/youth.htm#vid>

ASA PROGRAM HELPS WIN SCHOOL AWARD!

St. Joan of Arc School in Indianapolis, IN was an award finalist for the Intel 2008 Schools of Distinction Award which honors schools for implementing innovative and replicable math programs that produce positive educational results.

"The Actuarial Foundation's involvement in our mathematics program was a key factor in our being named a finalist. I believe that the Foundation's Advancing Student Achievement program and the mentors who have dedicated their time and talent to St. Joan of Arc School should share in this award. It has indeed been a community effort."

— Beth Groves, Assistant Principal

Thank you mentors for sharing your time with the students of St. Joan of Arc School: **Brent Kahl**, Lead Mentor, Envision Actuarial Designs; **Heather Adams**, OneAmerica; **Ryan Bedel**, Alliance Benefit Group; **Andrew Henn**, WellPoint; **Charles**

Munsell, The Nyhart Company; **Carl McClelland**, and **Tina Panyard**.

To learn more about mentoring opportunities in your community, visit the Foundation's Web site at:

http://www.actuarialfoundation.org/youth/call_for_mentors.htm

RESEARCH & ACTUARIAL EDUCATION

We're moving boldly to handle the challenges of the future.

AWARDS, PRIZES AND SCHOLARSHIPS

.....and the **ERM Research Excellence Award** goes to.....**B. John Manistre**, FSA, FCIA, MAAA for his paper: *A Practical Concept of Tail Correlation*. The Foundation's ERM Research Excellence Award was established to recognize the Best Overall Paper



Gary Josephson and John Manistre

submitted for excellence and to recognize its significant contribution to the growing body of ERM knowledge and research.

The award was presented by Gary Josephson, Foundation Trustee, to John Manistre at the 2008 ERM Symposium held in Chicago this past April. To view this award winning scientific paper visit: http://www.actuarialfoundation.org/research_edu/prize_award.htm#ERM

Congratulations to Colleen McGlaughlin, a student at the University of Iowa, recipient of the 2008 **Actuary of Tomorrow - Stuart A. Robertson Memorial**



Colleen McGlaughlin

Scholarship. This annual scholarship of \$7,500 recognizes and encourages the academic achievements of undergraduate students pursuing a career in actuarial science.

Individual Grants Competition

This annual research program supports the advancement of knowledge in actuarial science. This program is sponsored by The Actuarial Foundation, the Casualty Actuarial Society and the Society of Actuaries. We are pleased to announce the **Individual Grants Competition** recipients for 2008:

Katrien Antonio, Universiteit van Amsterdam, for her project, *Stochastic Claims Reserving: Micro Models for Run-Off, Incorporating Expert Opinion, and the Interaction with Extreme Value Methodology*.

Vytaras Brazauskas, University of Wisconsin, was awarded a grant for his project, *Robust and Efficient Methods for Quantitative Risk Management*.

Wai-Sum Chan, The Chinese University of Hong Kong, for his project, *On Robust Testing and Modeling of Nonlinear Stochastic Return Processes with Actuarial Applications*.

Luyang Fu, State Auto Insurance Company, for his project, *Optimal Layers for Excess Catastrophe Loss Reinsurance*.

Joseph Hyun-Tae Kim, University of Waterloo, for his project, *Estimating Allocated Capital Using the Bootstrap*.

Spyridon Vrontos, University of Piraeus, a project entitled, *Asset-Liability Management for Pension Funds in a Time-Varying Volatility Environment*.

Ping Wang, St. John's University, awarded a grant for, *Pricing Multi-Year, Multi-Line Reinsurance Using Copulas*.

Maria Rizzo, Bowling Green State University, for her project, *New Goodness-of-Fit Tests for Pareto Distributions*.

Doug Andrews, University of Waterloo, for his project, *Social Insurance Summer Academy and Educational Monograph*.

Project Math Minds

Want to open a worker's compensation insurance company, but don't know where to do it? Just ask Bryan McMeen!



Robert T. Eaton

"No. He's not an actuary. He's a high school senior. But because of a program called *Project Math Minds*, he's learned about the actuarial profession and may even pursue this as a career.

Bryan was a participant in a scholarship program sponsored by The Actuarial Foundation called *Project Math Minds*. The project, conducted in partnership with Mu Alpha Theta (MAO) encourages high school students to apply mathematics to real-world actuarial situations. Mu Alpha Theta is a U.S. mathematics honor society for over 75,000 high school students focusing on math competitions, scholarships and the encouragement of mathematical studies. It is particularly a thrill for me to be involved because I was a MAO member in my high school days.

In its inaugural year, the *Project Math Minds* development team designed an actuarial project laid out in the framework of worker's compensation insurance. The scholarship program and project challenge was introduced to students at the 2007 National Mu Alpha Theta Convention for awarding in 2008.

Students who chose to take on this challenging project were given a large set of historical data and a description of key shareholders and objectives with the task of determining an optimal strategy for penetrating certain markets in order to meet an overall target profit level.

Bryan McMeen, a friendly and energetic high school senior from Grissom High School in Alabama, was the 2008 award winner. His project was both thorough and well-communicated. Bryan provided a comprehensive

solution to a complex topic that was relatively new to him. For his project, Bryan used 20 years of data to calculate the best states to open an insurance business that would yield at least an 8 percent underwriting profit: Florida, Texas, Hawaii, Alabama and Arkansas and the District of Columbia.

Bryan was graded on a scale of 1 - 100, with differing weights given to creative ability, use of mathematics, actuarial thought, thoroughness, skill, and clarity. He accepted the scholarship reward of \$5,000 and certificate at this year's 2008 National Mu Alpha Theta Convention and gave a brief presentation to his fellow students describing his experience with *Project Math Minds*. Following the success of the 2008 program, The Actuarial Foundation and *Project Math Minds* volunteers are gearing up for next year."

— Robert T. Eaton, ASA, MAAA
Project Math Minds
Team Member

If you are interested in volunteering to work on a Project Math Minds team; or to get a copy of Bryan's paper, contact Debbie McCormac at the Foundation office at (847) 706-3600 or via email at: debbie.mccormac@actfnd.org



Bryan T. McMeen

"I would like to personally thank The Actuarial Foundation for the opportunity created by this contest. My gratitude is immense; I cannot quite thank you enough for this award. I enjoyed the challenge of this project. I spent a number of hours thinking about how to go about solving the problem presented and countless hours on the Internet studying the actuarial science field. I have become more intrigued about actuarial science as a result of this project. Actuarial Science has become one of my top two career path areas to pursue in college. I cannot say for certain what the future holds, but I have definitely developed an interest in actuarial science and a career in mathematics as a result of this project.

I think this project was an inspiring idea, and I can honestly say that I have a greater respect for the actuarial field. I understand the importance of a college education, and I feel truly fortunate to have received the opportunity and blessing provided by this award."

Sincerely,

Bryan T. McMeen

Thank You Volunteers

A very special thanks to the *Project Math Minds* volunteers who dedicated valuable time to the development, mentoring and selection activities this past year.

Thanks to.....

Satya Arya, Pamela Barlow, John Deacon, Judy Joffe, and Calvin Wolcott of National Council on Compensation Insurance; Adrian Clark of Milliman; David Dubois of California Public Employees' Retirement System; Robert Eaton of Blue Cross/Blue Shield of MA; Robin Fichtelberg of Transamerica Insurance & Investments; Jeremy Fogg and Wei Hao of State Farm Insurance Companies; Geoffrey Hileman of Blue Cross/Blue Shield of North Carolina; Kevin Larsen of ING; Scott Meyer of Delta Dental of Wisconsin; Dennis Muniz of Boston Mutual Life Insurance and to Jack McKee.



Stack the Odds in Favor of Students ...

Actuarial Foundation Charity Event

Join us in a night of gaming and festivities to support achievements in mathematics

Back by popular demand; and in duplicate for 2008!

Enjoy an evening of recreational gaming, hors d'ouvres, spirits, raffle prizes and magical entertainment at no cost to you at one or both of the following actuarial meetings:

CAS Loss Reserve Seminar, September 18, Washington, DC
SOA Annual Meeting, October 20, Orlando, FL

Registration is required as space is limited.

To register go to: http://www.actuarialfoundation.org/charity_event.htm

Special thanks to our Charity Event sponsors for bringing these events to you in support of Foundation programs that enhance achievements in mathematics for students across the country. Our Banner Sponsor *Milliman*; and our Event Sponsors: *Deloitte Consulting, Towers Perrin, Benfield Group, Hannover Life Re, Munich American Reinsurance, Max Bermuda* and *Munich Reinsurance America*.

JOIN OUR EFFORTS AND DONATE TODAY 3 EASY OPTIONS!

- 1 Give online at the Foundation's secure Web site. Tribute and/or Memorial gifts may also be designated online at: <http://www.actuarialfoundation.org/donor/donor.htm> or
- 2 Send in the donor reply card included with this edition of the newsletter; or
- 3 Call us at 847-706-3535



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ATTENTION

MIDWESTERN ACTUARIAL FORUM MEMBERS

Members' donations to The Actuarial Foundation will be matched by Midwestern Actuarial Forum, dollar-for-dollar, up to a goal of \$5,000. Member contributions plus the MAF match will mean

\$10,000 to support the Foundation's many initiatives.

Donate at the MAF special donate button at:

<http://www.actuarialfoundation.org/donor/donor.htm> today!

'Conversions'

(continued from page 2)

teachers and was one of the most downloaded curriculum programs ever. *Conversions Rock* adds to our growing library of resources for teachers.

The Actuarial Foundation will publicize the release of *Conversions Rock* in the coming weeks. Materials from the two previous programs, testimonials from actuaries who participated and more are available on the Foundation's Web site, www.actuarialfoundation.org.

These math enhancement programs, popular with teachers and students alike, are made possible through the generous gifts of individuals and corporate sponsors. On behalf of the teachers and students these programs benefit, Thank you.

ACTUARIAL CAREERS, INC.®



This Newsletter has been made available to you through a grant from Actuarial Careers, Inc.®

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Preparing for Tomorrow's Possibilities through Education

Corporate partnerships have helped fund many of the Foundation's programs in youth education, consumer education and research and actuarial education. Thanks to growing support from our corporate partners, we've added a new giving category recognizing those companies whose annual support has eclipsed the \$50,000 level. Thanks to all of the organizations below whose support of our mission has made so much of our work possible. *As of 8/1/07 - 8/01/08.*

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Transamerica Reinsurance

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The Wizard of Odds Consulting

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The companies listed with a gold star have made annual corporate contributions to The Actuarial Foundation in each of the last five years.

We thank you for your ongoing support!

THE ACTUARIAL FOUNDATION

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