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In Celebration of  
CAS Volunteers:  
The 2012  
VOLUNTEER  
HONOR ROLL

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## New Fellows by Mutual Recognition

### Matthew Ball

Fellow, Institute and Faculty of Actuaries (U.K.)  
Towers Watson

### Thomas James Marshall

Fellow, Institute and Faculty of Actuaries (U.K.)  
Zurich North America 

## Help Locate CAS Members

The CAS has lost contact with the following members. If anyone knows of the whereabouts of these members or how to contact them, please contact the CAS Actuaries' Resource Center at [ARC@casact.org](mailto:ARC@casact.org).

Damian Thomas Bailey, ACAS

Daniel F. Baxter, FCAS

Sherri Lynn Border, FCAS

Cary J. Breese, ACAS

Scott C. Davidson, ACAS

Andrea L. Eugene, FCAS

George Fescos, FCAS

Ann E. Green, FCAS

David John Gronski, ACAS

Fiona E. Ha, FCAS

Allen A. Hall, FCAS

Malcolm Handte, FCAS

Eric Anthony Hatch, FCAS

Philip A. Kane, ACAS

Changseob Joe Kim, FCAS

Nancy E. Kot, FCAS

Xin Li, FCAS

Brian Michael Lubeck, ACAS

Robert V. Mucci, FCAS

M. Charles Parsons, FCAS

John S. Peters, FCAS

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Josephine L.C. Tan, ACAS

Shengbo Tang, FCAS

Glenda Oliver Tennis, ACAS

Thomas V. Warthen, FCAS

Christopher Brian Wei, ACAS

Richard T. Zatorski, FCAS 

# Thoughts on Education



**W**hile I have not been trained as an educator, the art and science of teaching have long been a personal fascination. Over the years, I have observed the impact a good teacher can have on his students in my husband Tom, who is a capable, caring, and dedicated teacher, with a wonderful ability to inspire middle-school aged children. My involvement as a trustee of The Actuarial Foundation has afforded yet another perspective on education. (I hope that you will remember The Actuarial Foundation in your year-end giving; together, we *can* improve the financial literacy of our nation).

The current buzz in U.S. elementary and secondary education circles revolves around adoption of the U.S. Common Core State Standards (Common Core). The Common Core defines the knowledge and skills students need within their K-12 education for success in college and careers. The objective of the Common Core is to provide a consistent, clear understanding of what students are expected to learn, so that parents and teachers have a shared vision of the educational objectives. The Common Core touches all aspects of education: curriculum, instruction and assessment. Adopted now by the majority of the states in the United States, the Common Core encourages and demands innovation in all aspects of education.

With education as a common objective, I thought it might be interesting to explore how the CAS might benefit from the work underlying Common Core. Perhaps the innovations that are occurring in U.S. elementary and secondary education could be applied to the CAS educational framework. In the remainder of this article, I'll highlight key changes inherent in adoption of the Common Core and discuss how they might apply to the CAS. These observations are meant only to stir dialogue about how we might continue to innovate and improve CAS basic education.

**Transparency.** The Common Core provides clear and consistent objectives for education, with evidence-based objectives by grade. Common Core objectives allow teachers and parents to work together toward a common set of goals.

The CAS can be proud of the transparency inherent in the curriculum for our basic education. Learning objectives for each exam are clearly stated and afford candidates a clear set of expectations. As candidates progress through the exams, they experience a progression of the learning objectives from exam to exam, allowing them to refine their knowledge and apply their skills to increasingly complex situations.

Is more needed, though, in improving the transparency of our assessment vehicles, specifically the grading of exams? Many candidates complain that grading is arbitrary and can be inconsistent from one year to the next. It is hoped that the Examiners' Report, which was first introduced with the Spring 2012 exams, will help in demystifying the grading process.

**Collaboration.** Development of the Common Core benefited from a comprehensive review of strengths of current state standards as well as lessons learned from those standards. It was informed by educational models of other top performing countries, with the aim that students be prepared to succeed in a global economy and society. Finally, by incorporating the perspectives of post-secondary educators, business and community leaders, and educational experts, as well as teachers and parents, the Common Core was further enhanced.

The CAS curriculum also benefits from the perspectives of a diverse constituency, including but not limited to practicing actuaries, candidates, universities, and employers/principals. Our Syllabus Committee regularly assesses the sufficiency of our curriculum in preparing candidates to meet the demands of casualty actuarial work. Our Education Policy Committee periodically evaluates the breadth of our curriculum against that of other actuarial organizations throughout the world. We're not afraid to make changes where changes are indicated. For instance, the Preliminary Education Task Force explored ways to enhance the depth and breadth of statistics coverage in our curriculum. This was in response to recommendations made by the Task Force on Educational Balance that were based on interviews with several leading employers of casualty actuaries.

**Fewer, Clearer, Higher Standards.** One of the goals of Common Core was to produce a set of fewer, clearer, and higher standards, covering only those areas that are critical for student success. This meant making tough decisions about what to include in the standards and what to no longer require.

The CAS education committees work diligently to identify the knowledge and skills required to be successful as a casualty actuary. Learning objectives for each exam clearly define the requirements and the syllabus is designed to give candidates the right "tools" to master that knowledge.

Yet, somehow, the CAS educational expectations continue to grow. Might we benefit from an exercise similar to that of

**From the President,** page 4

## Balancing Views on Climate Change

### Dear Editor:

It is amazing, nearly three years after the Climategate scandal exposed the blatant fraud behind the climate alarmism movement, that we are still subjected to one-sided brow-beating with regard to this issue. Based on the presentation of this article, “Actuaries Can Help Insurers Understand the Complex Challenges of Climate Change” (*AR*, August 2012), and the panel on which it is based, one is left to ponder whether “95% of climate scientists agree” that Americans are dumber than Canadians, and Republicans are dumber than Democrats, since they apparently don’t “believe in thermometers.” Well then, I guess that settles it.

Even if there were a “scientific consensus,” that human activity is cooking the planet and making the weather more volatile, that does not make it an actual fact. But the scientific consensus is itself a myth. In 2010, more than 1,000 scientists from around the world voiced their dissent to the United Nations Intergovernmental Panel on Climate Change.<sup>1</sup> Among the dissenters are members of the IPCC itself. And earlier this year, 49 former NASA scientists and astronauts sent a letter to NASA

stating, in part, “We believe the claims by NASA and GISS, that man-made carbon dioxide is having a catastrophic impact on global climate changes are not substantiated.”<sup>2</sup>

And I found it incredibly revealing that one of the panelists says that the reason for the obstinate reluctance of Americans (especially those troublesome conservatives) to buy into the prevailing wisdom is that “the media give undue exposure to skeptics.” Show me someone who complains that the views of his opponents get too much exposure, and I’ll show you someone whose views will not bear the weight of public scrutiny. We are actually asked to believe that the problem is that the media has not tried hard *enough* to prop up the phony “consensus,” ignore the Climategate scandal, and jam the alarmist propaganda down our throats.

There is no shortage of distinguished scientists who can present a cogent counterargument to the alarmists. And while there are those who desperately want to pre-empt debate by pretending they have no real opposition in the first place, the CAS should not assist them in that effort, by only including the views of one side through its choice of speakers and panel participants.

—Eric Clymer, FCAS 

<sup>1</sup> <http://www.climatedepot.com/a/9035/SPECIAL-REPORT-More-Than-1000-International-Scientists-Dissent-Over-ManMade-Global-Warming-Claims--Challenge-UN-IPCC--Gore>

<sup>2</sup> <http://www.businessinsider.com/nasa-scientists-dispute-climate-change-2012-4>

## From the President, From page 3

Common Core, where we make the tough decisions about what needs to be included in the curriculum and what might no longer be required?

**Critical Thinking/Synthesis Skills.** Educational research supporting the Common Core Standards concludes that in the emerging workplace “most students—not just the elite few—must be able to find, synthesize, and evaluate information from a variety of subjects and sources.”<sup>1</sup> In response, the Standards deemphasize pure memorization skills but instead require students to have well-developed and honed higher-order thinking skills.

If elementary and secondary education are successful in training all high school graduates to think critically, what does that mean for professional education? CAS members will, in turn, need to be a step above, integrating more complex concepts to solve even more difficult business issues.

The CAS understands the evolving demand for critical thinking and synthesis skills and is working to implement higher-level cognitive thinking (Bloom’s Taxonomy) in its

examination process. Effective implementation demands that we prepare question writers and graders as well as candidates for evolving assessments of the learning objectives. Candidates will no longer be able to study exclusively from past examinations, as the questions they encounter will be new and geared to making deeper and more complex connections with the syllabus materials. CAS Examination Committee members know first-hand the difficulty of designing appropriate higher-level thinking questions and considering the variety of acceptable answers to such questions. This isn’t easy, but the CAS is making progress.


**Integration of Technology.** The Common Core does not treat technology as a separate strand of content, but rather incorporates expectations of technological proficiency throughout the content standards. The need to use technological tools effectively is embedded into every aspect of education. With enabling technologies, teachers are better able to differentiate instruction; with technology, students are able to hone synthesis and critical thinking skills through collaboration and teamwork.

From the President, page 5

<sup>1</sup> Berry, B., *Teaching 2030*, 2011, New York: Teachers College Press.


# D.W. Simpson Makes CAS Trust Donation

The Trustees for the CAS Trust are pleased to announce that D.W. Simpson Global Actuarial Recruitment donated \$10,000 to the Trust in 2012. This brings the total contribution by D.W. Simpson to the Trust to \$160,000 over the past several years.

The CAS sincerely thanks D.W. Simpson and its employees for its continued support of the CAS mission to advance actuarial science. 

## MRC is now the Actuaries' Resource Center

The CAS Member Resource Center (MRC) is now called the Actuaries' Resource Center (ARC). The CAS made the name change in October 2012 to better reflect the broader focus of the department as well as the constituencies that the Society

serves—candidates, academics, and members. The CAS is updating the website, e-mail addresses, and the like with the new name. 

### From the President, From page 4

How effective has the CAS educational process been in integrating technology and inviting collaboration among candidates? With modeling a core competency for today's casualty actuary, should the CAS consider assessment techniques that encompass technology-enhanced projects? How might we effectively control such projects? Should we, and how might we, consider a candidate's ability to work as a member of a team in our assessment process?

Universities are ahead of the CAS in incorporating these technology-enabled assessment techniques in their educational processes. Could we team with universities to explore how the CAS might enrich its educational process by incorporating these concepts?


**Assessment.** The Common Core encourages teachers to explore the countless possibilities through which students can prove that they have reached the intended goal. There is not one assessment vehicle; instead, teachers are encouraged to recognize the unique learning styles of each student and to use vibrant, diversified, and technology-embedded tools to test knowledge and skills.

For the most part, the CAS has a single, self-administered assessment vehicle: our examinations. There's a

simplicity to our system, but is it the only way that we can ensure that our learning objectives have been met?

I believe that the CAS educational process is strong enough to allow for diversity in assessment. The CAS can still maintain rigorous standards of performance for our members while broadening the vehicles through which those skills are demonstrated. Particularly for subjects covered in the preliminary examinations and VEE, we should be open to considering the possibilities.

The CAS educational process is the most robust and comprehensive system in the world for training casualty actuaries. It has a proven track record of preparing casualty actuaries for meaningful careers, whether those careers are in traditional areas of practice or in emerging areas. CAS members are respected globally for the knowledge and skills that they offer in bringing insight and solutions to complex business issues.

True leaders constantly push themselves and their organizations by incorporating new research, making use of evolving technologies, and nurturing innovation. In order to maintain our leadership position, the CAS must ask the tough question: How can we improve our CAS educational process to meet the future casualty actuary's needs? 



# CAS to Recognize Canadian Institute of Actuaries' University Accreditation Program Exam Exemptions

In December 2011, the Canadian Institute of Actuaries (CIA) announced its inaugural list of universities accredited under the CIA's University Accreditation Program (UAP). Beginning in September 2012, students who have successfully completed specific courses at approved universities will have the option of applying to the CIA for exemptions for Exams 2/FM, 3F/MFE, 3L, SOA Exam MLC, and 4/C. Consistent with the CAS waiver policies for examinations, the CAS Board of Directors has approved the recommendation of the CAS Executive Council and the Education Policy Committee that the CAS recognize the exam waivers granted by the CIA for CAS preliminary examinations.

The new CAS waiver policy only applies to credits granted through the CIA for courses at accredited Canadian universities. It is important to note that these waivers will not be extended to universities in the U.S. The diversity of education in U.S. universities makes a similar accreditation and waiver process difficult to manage and evaluate in the necessary depth that is required for such a rigorous program.

In March 2010, the CAS Board approved a resolution that would allow the CAS to grant waivers for CAS exams to those who would have been granted exam credit through the Canadian Institute of Actuaries (CIA), subject to review and recommendation by the CAS Education Policy Committee (EPC) and approval by the Executive Council (EC). These waivers, if granted, would be similar to the waivers currently granted for examinations of the Institute and Faculty of Actuaries (U.K.), the Actuaries Institute (Australia), and the Institute of Actuaries of India.

Following the CIA announcement, a comprehensive review of the program by the EPC, and approval by the EC, the CAS has decided to recognize exam credit granted by the CIA under its University Accreditation Program. The decision was the culmination of a multi-year process that involved the CAS working with and monitoring the CIA's development of policies, procedures, academic standards, and evaluation of universities and individual courses to ensure that the standard for exam waivers would be at least as rigorous as an actuarial exam. Because of the rigorous process followed by the CIA and affirmed by the EPC, the Executive Council agreed that granting these waivers does not endanger the quality of the CAS education process or the value of CAS credentials. Ongoing review of the requirements in the future will ensure that this rigorous process is maintained. Documentation of the CIA Accreditation Process is attached in the Appendix of the CIA's announcement.

A summary of the activities undertaken by the EPC to determine the viability of waivers follows.

The EPC was kept apprised of the ongoing work of the CIA UAP through its liaison to the CIA's Accreditation Committee. In December 2011, the EPC was informed that the Accreditation Committee had completed its initial review process and had approved eight universities. Subsequently two additional universities were approved by the CIA.

The EPC created an accreditation review subcommittee to review and evaluate in depth the CIA's policies, standards, and processes related to the UAP. The subcommittee was not charged with reviewing the waiver policy approved by the Board; rather, it was asked to evaluate the CIA program within the context

[Exam Exemptions](#), page 7



Canadian  
Institute of  
Actuaries



Institut  
canadien  
des actuaires

of the existing CAS waiver policies for examinations. The EPC requested and received relevant documents as part of its review. During January and February 2012, the subcommittee reviewed the material provided by the CIA and came to a consensus recommendation that was presented to the full EPC.


The EPC held a teleconference in February 2012 to discuss the findings of its accreditation review subcommittee. Derek Freihaut, the chairperson of the EPC, reported that the subcommittee was comfortable that the CIA's UAP meets the requirements for syllabus coverage and handling of grade levels, and addresses concerns about grade inflation. After discussion, the EPC approved the following motion with a vote of five in favor, none opposed, and two abstentions: "that the Canadian Institute of Actuaries' University Accreditation Program waiver process would meet the requirements to grant waivers for CAS exams. We recommend that the CAS assign a liaison to the CIA process. We recommend that there be a requirement of a follow-up review by the Education Policy Committee within three years of approval."

The CAS Executive Council subsequently approved the EPC's recommendations by unanimous vote during its July 2012 meeting.

To gain CIA exemptions, students will submit official transcripts to the CIA showing they have achieved the minimum grade requirement (which varies by university), along with an application and 80% of the corresponding CAS/SOA exam fee.

The CAS decision is consistent with the spirit of the current waiver policy to grant exam waivers based on exams of the Institute and Faculty of Actuaries (U.K.), the Actuaries Institute (Australia), and the Institute of Actuaries of India, where the CAS recognizes credit given for exams waived based on university exams that are closely monitored and evaluated by those actuarial societies.

For further information on receiving credit for exam waivers through the CAS, please contact the CAS Member Resource Center ([mrc@casact.org](mailto:mrc@casact.org) or 703.276.3100).

Read the CAS Roundtable blog post, "Toward a Better Understanding of the CAS Board Decision to Recognize CIA Exam Waivers for CAS Preliminary Exams," for more insight into the Board's decision and to share your views on the issue. Access the Roundtable at <http://blog.casact.org>. 

# Professionalism, Education Rank Highest in Membership Survey

By Walter Wright

*In the November 1987 issue of the AR, Robert F. Conger reported on the first Membership Survey conducted by the CAS. The survey group included 1,440 Fellows, Associates, and Students, of whom 893 responded. Although not all of their recommendations have been adopted it is clear that their input has shaped the CAS. Here are some selected findings from Mr. Conger's more thorough report.*

## Professionalism

A substantial majority of respondents (72%) indicate that there should be formal standards of practice. Forty-two percent believe that there is not sufficient formal monitoring and discipline of actuaries' work, while 29 percent believe monitoring and discipline are sufficient. . .

## Continuing Education

Most believe the CAS should place more emphasis on continuing education, and half assign a high priority to the development of broader continuing education programs. Only 7% of the respondents, however, believe that the CAS should determine mandatory requirements for continuing education; most believe the CAS should provide *opportunities* for such education. . .

## Education and Examinations

Twenty-five percent of respondents list these areas as among the most important facing the CAS over the next five years. . . Topics in the field of finance are most often nominated for addition to the *Syllabus*, and about half the respondents recommend more emphasis on reinsurance and loss distributions. . .

**25 Years Ago,** page 8

# CAS Announces Inaugural Class of CERAs



**T**he Casualty Actuarial Society is pleased to announce its inaugural class of candidates who have earned the CERA (Chartered Enterprise Risk Analyst) credential. The international credential identifies actuaries who meet stringent education requirements in ERM and are governed by a strong code of professional conduct.

The fall 2012 class includes:

**Avraham Adler, FCAS, CERA**

Vice President  
Guy Carpenter & Co. LLC  
Morristown, NJ

**David Patrick Moore, FCAS, CERA**

Vice President and Actuary  
CNA Insurance Companies  
Chicago, IL

**Vikas P. Shah, FCAS, CERA**

Director of Pricing and Product Development  
Baldwin & Lyons, Inc.  
Indianapolis, IN

**Jared G. Smollik, FCAS, CERA**

Manager-Actuarial  
Insurance Services Office, Inc.  
Jersey City, NJ

**Bryan C. Ware, FCAS, CERA**

Senior Vice President and Chief Actuary  
Employers Insurance Group  
Reno, NV


**Sandy Wu, FCAS, CERA**

Vice President and Actuary  
Allied World Assurance Company  
Pembroke, Bermuda

As Fellows of the CAS, these individuals completed the following additional educational requirements for earning the credential with the CAS:

- Successful completion of the three-day CAS Enterprise Risk Management and Modeling Seminar for CERA Qualification.
- Achievement of a passing score for Exam ST9, Enterprise Risk Management Specialist Technical, of the Institute and Faculty of Actuaries (U.K.).

These new CERAs will be recognized during the 2012 CAS Annual Meeting, being held in Lake Buena Vista, FL, at the Walt Disney World Swan and Dolphin Hotel, November 11-14.


Details on the CAS CERA program can be found on the CAS Web Site at <http://www.casact.org/CERA/>. 

## 25 Years Ago, From page 7

### Attitudes on Exams

The vast majority of respondents (82%) believe that the exams place too much emphasis on the student's ability to memorize details, and more than half feel the exams place too little emphasis on the ability to conceptually understand material and too little emphasis on creative problem-solving abilities...

### Actuarial Issues

Most respondents believe the time value of money should be reflected in the establishment of reserves, but would show undiscounted amounts as well. 



*The following letter was posted to the CAS Web Site on October 24, 2012.*

## *An Open Letter to CAS Members and Candidates Regarding the SOA Decision to Withdraw from Joint Preliminary Actuarial Exams*

**To: CAS Members and Candidates**

**From: CAS President Pat Teufel**

The Society of Actuaries (SOA) recently announced that its Board approved a proposal to not continue the Joint Preliminary Actuarial Examination Agreement with the Casualty Actuarial Society as of December 31, 2013. As the CAS has been a long-standing partner of the SOA in the preliminary actuarial exams, the decision of the SOA to withdraw from the agreement is disappointing.

The SOA's action negatively affects one of the most successful, and fundamental, joint activities of the SOA and CAS, and signals a shift by the SOA away from cooperation and collaboration with the other U.S.-based actuarial organizations. While the CAS relationship with the SOA has been strained this year, the CAS remained committed to working toward collaborative solutions to the challenges and opportunities faced by the actuarial profession in the United States. CAS leadership met on several occasions with SOA leadership to explore alternative approaches to address the strategic issues identified by the SOA. The CAS participated with the other U.S.-based actuarial organizations in the U.S. Profession-wide Task Force sponsored by the American Academy of Actuaries. That Task Force recommended that "the organizations identify functions (with consideration of antitrust constraints, if any) that can be made more efficient through collaboration or consolidation and proceed accordingly." While the SOA participated in this Task Force, the actions of its Board are inconsistent with the recommendations made by the Task Force as well as the spirit underlying the creation of the Task Force.

While the CAS is clearly disappointed by the SOA Board decision to withdraw from the Joint Preliminary Actuarial Examinations Agreement, this action was anticipated. Recognizing the changing dynamics of our relationship with the SOA and the risks it presented to the CAS, your leadership exercised sound risk management practices to systematically identify and prepare for multiple contingencies, including the potential withdrawal of the SOA from the Joint Preliminary Actuarial Examinations Agreement. The future direction for CAS preliminary actuarial education is on the agenda for the CAS Board of Directors meeting scheduled for November 11. We will communicate any decisions as soon as possible following the Board meeting.

The CAS credentialing program is, and will continue to be, the most robust and comprehensive framework for training casualty actuaries. Our educational process is a proven commodity and highly valued around the world by employers and other stakeholders. We are committed to ensuring that the CAS maintain and enhance the value of our credentials.

### **Remainder of 2012 and 2013**

The CAS will continue to work with the SOA through the conclusion of their notice period of December 31, 2013, to offer high-quality preliminary examinations to our actuarial candidates. Candidates currently sitting for preliminary examinations, and those deciding to pursue an actuarial career, should focus on successfully mastering the materials covered in the preliminary exams. No career decisions are required of candidates at this time.

The CAS will continue to support the Joint Preliminary Actuarial Examinations during this period. Countless CAS members provide support and leadership of these exams through the Joint Preliminary Examinations Committees. We thank our CAS members for their past support of this collaborative effort and are confident that our CAS members will remain dedicated to this process throughout the transition.

### **2014 and Beyond**

Candidates in the early stages of their actuarial careers generally defer their decision to pursue the CAS credentials, over other alternatives, until they obtain their first full-time assignments. The CAS believes that it is desirable to offer CAS candidates a wide variety of options in its admissions program. The CAS policies currently recognize candidates who have passed or received credit for some examinations sponsored by other actuarial organizations that cover the equivalent material in both subject and depth to the CAS curriculum. These organizations include the Institute and Faculty of Actuaries (U.K.), the Actuaries Institute (Australia), the Institute of Actuaries of India, and the Canadian Institute of Actuaries. Our Education Policy Committee is currently evaluating the equivalence of preliminary examinations offered by other full member associations of the International Actuarial Association. At its

**Open Letter**, page 11

# Two Papers Chosen for *Variance* Prize

The *Variance* Editorial Board selected two papers for the 2011 *Variance* Prize. John A. Major won for his paper, “Risk Valuation for Property-Casualty Insurers,” and was also part of a team that received the 2011 *Variance* Prize. Mr. Major, Shaun Wang, Hucheng (Charles) Pan, and Jessica Leong won for their paper titled, “U. S. Property-Casualty: Underwriting Cycle Modeling and Risk Benchmarks.”

Mr. Major is senior vice president and director of actuarial research at Guy Carpenter & Company, LLC, where he is responsible for the development of new risk analysis methodologies and leadership of actuarial and statistical research and consulting. Before that, he was assistant director of research at the Travelers and a Teaching Fellow at Harvard University. His multiple award-winning research—encompassing expert systems, claim fraud detection, insurance-linked securities, game theory, terrorism risk, multifractals, catastrophe modeling, and the underwriting cycle—has appeared in over a dozen different journals and books and has been cited in hundreds of scholarly articles.

Dr. Wang is an FCAS and chairman of Risk Lighthouse LLC, a research firm based in Atlanta. He is also the Thomas P. Bowles Professor of Actuarial Science in Georgia State University’s Robinson College of Business. He has published over 30 papers in leading actuarial and insurance journals, and has won several international prizes. He served as editor of the *ASTIN Bulletin* and is the author of the Wang transform. He has a B.Sc. in mathematics from Peking University and Ph.D. in statistics from the University of Waterloo. He is also a Member of the American Academy of Actuaries.

Hucheng (Charles) Pan, ASA, has extensive expertise in mathematical and statistical modeling. Mr. Pan formerly worked for large Chinese insurance companies and government agencies. He earned an M.S. in actuarial science and M.A. in economics from Georgia State University, and a B.A. in economics and risk management from Peking University in Beijing.

Jessica Leong, FCAS, is the lead casualty actuary in



Jessica Leong



John A. Major



Hucheng (Charles) Pan



Shaun Wang

managing the research, development, and application of Guy Carpenter’s expertise in risk modeling and quantification in casualty lines of business. Prior to joining Guy Carpenter, Ms. Leong spent the last ten years as a consulting actuary at Towers Watson in Melbourne and London and at Milliman in New York, where she specialized in the quantification of reserve and loss ratio risk for clients. Jessica speaks regularly at industry conferences and writes papers on risk quantification. She also serves on committees of the CAS and the Institute of Actuaries of Australia. She graduated with an honors degree from the University of Melbourne, with a major in actuarial studies.

Both of the papers are published in Volume 5, Issue 2 of *Variance*. 

# Josephson to Become CAS President; Fisher Voted President-Elect

**ARLINGTON, Va.**—Gary Josephson, who was voted in as president-elect in 2011, will become CAS president at the close of the 2012 CAS Annual Meeting. Wayne Fisher has been elected CAS president-elect.

Balloting for the 2012 CAS election closed on August 31, 2012.

A total of 1,670 Fellows voted (41.4%), as compared to 1,375 Fellows last year (35.5%).

CAS Fellows elected Charles A. Bryan, David R. Chernick, Ann Conway, and Rick Gorvett to the Board of Directors.

Immediate Past President Patricia A. Teufel will chair the CAS Board of Directors. The following members were elected or reelected by the CAS Board to serve as vice presidents:

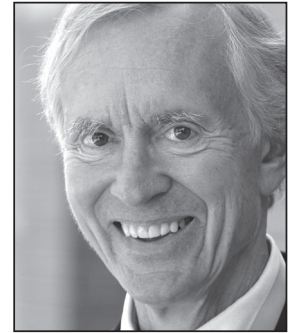
- G. Chris Nyce, Vice President-Administration
- Virginia R. Prevosto, Vice President-Admissions
- Barry Franklin, Vice President-ERM
- Robert F. Conger, Vice President-International
- Arlie Proctor, Vice President-Marketing and Communications
- Mary D. Miller, Vice President-Professional Education
- Alice M. Underwood, Vice President-Research and Development

These Fellows will take on their roles at the close of the 2012 Annual Meeting in Lake Buena Vista, Florida.

According to the election procedures approved by the Board, all vote counts are released to the membership. These follow in the table at right. [!\[\]\(5361750c22c4e047a52f4eac1ec2d4cc\_img.jpg\)](#)



*Gary Josephson*



*Wayne Fisher*

	Votes
<b>President-Elect</b>	
Wayne Fisher	1,346
<b>Director</b>	
Ann Conway	936
David R. Chernick	785
Charles A. Bryan	767
Rick Gorvett	744
Richard Fein	705
David J. Oakden	603
James B. Rowland	558
Michael C. Dubin	374

## Open Letter, From page 9

November 11 meeting, the CAS Board will consider waiving examinations for candidates who have passed preliminary examinations sponsored by the SOA, thus leaving CAS candidates a wide range of options for meeting the learning objectives and subject matter covered by our preliminary actuarial education.

Coincident with this effort, the CAS will continue to enhance our basic education to meet the current and emerging needs of employers and other principals. For example, the increased use of predictive models for pricing and capital management demands a more extensive treatment of statistical methods in our actuarial training; the CAS is actively working to enhance the depth and breadth of statistics coverage in our *Syllabus of Basic Education*.

The CAS will continue to focus on the breadth and depth of materials covered in our higher-level examinations. This will ensure that we maintain a clear differentiation in the quality of our education in preparing our casualty actuaries to bring their technical skills to bear in developing practical solutions to business problems for the property/casualty insurance industry.

We welcome your comments and feedback sent to [office@casact.org](mailto:office@casact.org). [!\[\]\(5d954b3e270654ad8ab0d5913161c03c\_img.jpg\)](#)

# Observations Regarding the CAS Continuing Education Compliance Process

## Audit Process

The Continuing Education Compliance Committee (CECC), a small group of volunteers, was charged with auditing the 2011 Continuing Education (CE) logs for a sample (1%) of members as well as the CAS Executive Council and elected Board members. Through the audit process the committee discovered and discussed a number of issues and misunderstandings surrounding CE requirements. This report discusses the audit process and provides our observations on the process and some guidance to CAS members on complying with the CE requirements.

We are pleased to report that all audited members passed. The CECC concluded, and the CAS Executive Council agreed, that each audited member met the requirements and documented his or her CE. If a member had not passed, the Executive Committee confirmed that their CAS status would have been changed to non-compliant, until the member could complete additional CE activity and provide updated documentation to the CECC.

The audit was conducted in such a way as to preserve the anonymity of the members being audited. The CAS members subject to the audit were randomly selected. Only the CAS staff knew the names of those selected members, with the CECC using only ID numbers. All communications with members were done by CAS staff. While all passed, some members did not receive as many hours as their original documentation indicated. We provided guidance to many of the audited members, based on CECC review of their documentation.

What constitutes CE is largely in the judgment of each CAS member. Activities that would be CE for one member may not be for another, depending on their prior education, background, and area of practice. As auditors, the CECC sometimes needed additional information to determine that the standards were satisfied, but what constituted CE was largely left to the judgment of the member.

## CE Reporting

Various national actuarial organizations require P&C actuaries to obtain continuing education, and the CAS requires members to comply with the standards in every nation they practice in, so CAS members can be subject to different standards, depending on where they provide services. In reporting to the CAS, members must indicate which standards they use for reporting compliance. Table 1 shows the standards that might apply to CAS members, and the basis for reporting compliance in this inaugural year. The various CE provisions and how members reported their compliance are shown in Table 2.

## Alternative Compliance vs. U.S. Qualification Standards

In our audit, each member was audited according to the standards under which they report. We note there appears to be confusion as to whether or when a member would report compliance under CAS Alternative Compliance Provisions vs. a national standard. The CAS Code of Professional Conduct requires members to meet national qualification standards, if they practice where national standards exist. So, for example, CAS members practicing in the U.S. must meet the American Academy of Actuaries (AAA) CE requirements, whether or not they are members of the AAA. Some actuaries may practice in a location without national CE requirements. For those, the CAS Continuing Education Policy provides an alternative compliance provision, called CASalt. Most CAS members reported compliance under the U.S. Qualification Standards or the CASalt (non-U.S., Canada, U.K., or Australia). While these two standards are similar, there are some distinct differences in meeting the requirements.

The terms “job relevant” or “relevant,” have slightly different meanings under the two standards. In addition, the definitions of “structured” and “organized” activity differ. The meanings and some examples are highlighted in Table 2.

A number of other items also differ under these standards. Please see the Table 3 for a comparison of key points.

**For questions on Continuing Education, contact the CAS Office.**

**Table 1**

	CAS Alternative Compliance Provisions (CASalt)	New Member	CIA Qualification Standard	IAAust CPD Standard	U.K. CPD Scheme Category 1 or Category 2	U.S. Qualification Standard
<b>Country</b>	N/A	N/A	Canada	Australia	United Kingdom	USA
<b>Promulgating Organization</b>	Casualty Actuarial Society	Casualty Actuarial Society	Canadian Institute of Actuaries	Institute of Actuaries of Australia	Institute and Faculty of Actuaries	American Academy of Actuaries
<b>CAS members indicating compliance with this standard in Feb 2012</b>	713	15	254	5	22	3,094
	17%	0%	6%	0%	1%	75%

**Table 2**

Terminology	CAS Alternative Compliance Provisions (CASalt)	AAA U.S. Qualification Standard
<b>Job relevant</b>	Only CAS uses this term; but it excludes "professionalism" and "business skills".	All CE must be relevant, but business skills and professionalism are included in relevant topics.
<b>Structured or Organized vs. Other</b>	"Structured" requirement of 45 units every two years; "structured" is broader than "organized".	"Organized" requirement of six hours per year.
<b><i>Exam study</i></b>	<i>Structured, capped at 15 hours per effective exam attempt.</i>	<i>Other activity, but actual hours spent count to totals.</i>
<b><i>In-house meeting</i></b>	<i>Structured as long as there was interaction among parties.</i>	<i>Other activity, unless professionals from outside organizations are also included.</i>
<b><i>Watching replay of actuarial meeting</i></b>	<i>Structured, only if question and answer or interaction among parties was recorded.</i>	<i>Other activity</i>



**Table 3**

Continuing Education Requirements	CAS Alternative Compliance Provisions (CASalt)	AAA U.S. Qualification Standard
<b>To whom does it apply</b>	Members of the CAS must comply with a national standard <sup>1</sup> or the CAS Alternative.	Actuaries issuing Statements of Actuarial Opinion (SAO) <sup>2</sup> in the United States <sup>3</sup>
<b>Total CE Required</b>	60 units every two years (rolling) ending 12/31. 50 minutes = 1 unit, fractional units counted. Transition: as of 12/31/11 must obtain 50% of standard requirements.	30 hours by 12/31 of the year preceding the issuance of an SAO. 50 minutes = 1 hour, fractional hours counted.
<b>Shortfall provision, if CE not met at end of preceding year</b>	Education must be completed prior to providing actuarial services in the current year.	Complete hours prior to issuing a SAO. Hours earned for the shortfall cannot also satisfy the current year requirement.
<b>Excess Carryforward provision</b>	None, but after 2011 units are met on a rolling two-year period.	One-year carryforward: Hours in excess of the annual requirement can be carried forward one year.
<b>Relevant CE Amount</b>	At least 45 units "job relevant" (excluding professionalism) every two years.	All hours must be relevant, either for technical work, professionalism, consulting or business skills.
<b>Relevant CE Definition</b>	(1) Broadens understanding of work actuary does, (2) Expands knowledge in related disciplines that bear directly on actuary's work, OR (3) Facilitates entry into new practice area.	(1) Broadens understanding of work actuary does, (2) Expands knowledge in related disciplines that bear directly on actuary's work, OR (3) Facilitates entry into new practice area
<b>Professionalism Requirements</b>	At least 6 units every two years.	At least three hours annually.
<b>Professionalism Examples</b>	No examples provided in policy.	Review or input to Exposure Draft of an ASOP. Review of the Professional Code of Conduct. Serving on the Actuarial Standards Board or professionalism committee.
<b>Business Skills Limitations</b>	Maximum of six units every two years.	Maximum of three hours annually.
<b>Business Skills Examples</b>	"Business and Management Skills"—no examples provided in policy.	<ul style="list-style-type: none"> <li>• Client relationship management</li> <li>• Presentation skills</li> <li>• Communication skills</li> <li>• Project management</li> <li>• Personnel management</li> </ul>

<sup>1</sup> The CAS Code of Professional Conduct requires members to meet national qualification standards if they practice where national standards exist.

<sup>2</sup> Statements of Actuarial Opinion encompass much of the reported work of a practicing actuary. It is a broader definition than a regulatory-prescribed SAO.

<sup>3</sup> There are additional specific CE standards that apply to AAA members providing Prescribed Statements of Actuarial Opinion or to Enrolled Actuaries. Also, CE requirements are only part of the overall Qualification Standard.

**Table 3 (continued)**

Continuing Education Requirements	CAS Alternative Compliance Provisions (CASalt)	AAA U.S. Qualification Standard
<b>Structured education or Organized activity needed</b>	Structured Education: At least 30 units every two years.	Organized Activity: At least six hours annually.
<b>Structured education definition</b>	<p>Opportunity for interaction among participants</p> <ul style="list-style-type: none"> <li>- Viewing a recorded session that includes a Q and A session counts as structured</li> </ul> <p>Studying for FCAS exams: 15 units for each exam 7, 8, or 9, if score earned is greater than 0</p>	N/A
<b>Organized activity definition &amp; examples of "Other activity" that still contributes to CE</b>	N/A	<p>Interaction with actuaries or professionals with other organizations</p> <p>"Other activity" (NOT Organized) includes:</p> <ul style="list-style-type: none"> <li>• Reading books, papers, or articles on relevant technical or professional topics.</li> <li>• Attending relevant in-house meetings.</li> <li>• Studying for exams.</li> <li>• Listening to tapes of actuarial meetings or seminars.</li> <li>• Preparing to speak or lead a discussion at a CE activity.</li> </ul>
<b>Documentation</b>	<p>Members must certify compliance annually; CAS may randomly audit a small percentage.</p> <p>All members must maintain a log of their CE activity, whether for national standards or Alternative Standards. Must include:</p> <ul style="list-style-type: none"> <li>• Date of activity</li> <li>• Brief description</li> <li>• Sponsoring Organization (if any)</li> <li>• Number of credits</li> <li>• Whether self-study or organized<sup>4</sup></li> </ul> <p>Must maintain log for six years.</p>	<p>Keep appropriate timely records; at a minimum must contain:</p> <ul style="list-style-type: none"> <li>• Date of activity</li> <li>• Credit hours</li> <li>• Brief description</li> </ul> <p>(The sample form also includes additional elements of sponsor, subject, area of practice, and whether organized, business skills, professionalism.)</p> <p>Records should be maintained for six years beyond the year to which they are applicable.</p> <p>Should be prepared to provide <i>evidence</i> of compliance with Qualification Standards including certificates of attendance (if any), meeting outlines (agendas), or handouts and notes relating to "other activities," <i>if requested</i> by the appropriate counseling or disciplinary body in connection with an SAO.</p>

<sup>4</sup> CAS may mean "structured" vs. "unstructured" if member falls under the Alternative Compliance Provision.

## Documentation

The CAS requires all members providing actuarial services to document compliance with CE requirements. It's not enough to meet the requirement; CAS members should also maintain a log of their CE activity to document that they have met the continuing education requirements. Because each member is required to maintain that documentation for six years, and people sometime change employers, members whose companies track CE centrally should also maintain a copy of their own documentation.

There are two main aspects to documentation:

- Documenting specific activities that constitute continuing education.
- Documenting that the hours spent meet the relevant standard.

Documentation should describe the following aspects of each educational activity:

- When it took place.
- How much time the actuary spent at it.
- The specific topic.
- If relevant, the venue or sponsor, to distinguish organized from non-organized activities.
- The category (or categories) of the standard fulfilled by this activity.

Table 4 shows examples of how various activities might be documented. These examples focus on meeting the AAA standard, but the same principles apply to meeting other relevant standards.

This is not perfect documentation. It contains abbreviations

**Table 4**

### *Attending a webinar*

1	3/14/12	90 min	AAA Webinar	U.S. Qualification Standards	Organized Professional Education
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### *Attending relevant in-company events*

2	3/28/12	60 min	HR Presentation	Annual Review Instructions	General Business
3	3/30/12	90 min	Actuarial Meeting	Corporate ERM models	Other

### *Attending a class*

4	4/17/12 – 4/18/12	540 min	The SAS Institute	Creating and Presenting GLMs in SAS	Organized
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### *Attending a CAS meeting*

5	5/20/12	220 min	CAS Spring Meeting	Leading without Authority	Organized Business
6	5/21/12	90 min	CAS Spring Meeting	CA WC and Pension Modeling	Organized
7	5/21/12	90 min	CAS Spring Meeting	Optimization in Ratemaking	Organized
8	5/22/12	90 min	CAS Spring Meeting	Business Communication	Organized Business
9	5/22/12	90 min	CAS Spring Meeting	Innovations in Vehicle Ratemaking	Organized
10	5/22/12	90 min	CAS Spring Meeting	Climate Change and Insurance	Organized
11	5/23/12	90 min	CAS Spring Meeting	WC Medical Costs	Organized

### *Performing committee work*

12	6/8/12	55 min	CE Compliance Committee	Discussed standards re Continuing Ed and how to document	Professional
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### *Reading articles/publications*

13	7/10/12	80 min	N/A	Read "Chain-Ladder Correlations" by Taylor	Other
14	7/17/12	150 min	N/A	Read "Capital Allocation" by D'Arcy	Other
15	8/27/12	45 min	N/A	Read "Note on Parameter Risk" by Venter & Sahasrabudde	Other
16	8/28/12	20 min	N/A	Review SoP on P&C Ratemaking	
17	1/1-8/30	150 min	N/A	Review <i>Business Insurance</i> headlines, 5 min per week, 30 weeks	Other

and isn't always complete. But it is adequate documentation to reconstruct what the actuary counted as continuing education, and why.

In addition to documenting the individual activities, it is important to document time spent at each activity. We saw a number of personal records with incorrect subtotals, double-counted hours, or more than the maximum number of hours for general business education.

The examples in Table 5 could be summarized like this:

**Table 5**

	Minutes	CE Hours	Organized	Professional	General Business	Other than Prof/GB
1	90	1.8	1.8	1.8		
2	60	1.2			1.2	
3	90	1.8				1.8
4	540	10.8	10.8			10.8
5	220	4.4	4.4		4.4	
6	90	1.8	1.8			1.8
7	90	1.8	1.8			1.8
8	90	1.8	1.8		1.8	
9	90	1.8	1.8			1.8
10	90	1.8	1.8			1.8
11	90	1.8	1.8			1.8
12	55	1.1		1.1		
13	80	1.6				1.6
14	150	3				3
15	45	0.9				0.9
16	20	0.4		0.4		
17	150	3				3

The correct totals for activities tallied above, limiting general business education, are:

	CE Hours	Organized	Professional	General Business	Other than Prof/GB
Totals:	36.4	24.6	3.3	3	30.1

An actuary reporting the above activities would meet the AAA standard for continuing education for 2012, with at least three hours of professional education, at least six hours of organized education, and at least 30 hours of total continuing education, not to exceed three hours of general business education.

### Relevant CE

Since, as a practical matter, almost all CAS members reported their compliance based on the AAA, CASalt, or Canadian Institute of Actuaries (CIA) standards, this section concentrates on these three standards.

All of the standards have at their core, the concept that CE is

aimed at ensuring that actuaries remain current on emerging advancements in actuarial science and other related disciplines. Importantly, each of the standards incorporates the concept that the CE must be *relevant* to actuarial work. For example:

1. Section 2.2.1 of the AAA Qualification Standards states that it is important that actuaries “remain current on emerging advancements in actuarial practice and science that are relevant to the Actuarial Services they provide” and that “actuaries working in emerging areas need to be familiar with relevant new techniques and concepts from related disciplines (e.g., economics, statistics, finance, investments, accounting, computer modeling, and law).” Section 2.2.7 states that CE is “relevant” if “(1) it broadens or deepens an actuary’s understanding of one or more aspects of the work an actuary does; (2) the material expands an actuary’s knowledge of practice in related disciplines that bear directly on an actuary’s work; or (3) it facilitates an actuary’s entry into a new area of practice.”

2. The CASalt requires that CE be job-relevant and defines “job-relevant” identically to how AAA defines “relevant” (see Part (4) of Section C of CAS Standard).

3. Section 2.2. of the CIA Qualification Standard states that acceptable CE activities “must be *relevant* at the time they are completed and appropriate to support the member in maintaining his or her level of skill and knowledge as the actuarial profession evolves.”

All of the standards hold the actuary responsible for determining whether or not a particular activity is relevant. Whether an activity is relevant may depend on the specific activity and the actuary’s current knowledge and circumstances.

Both the AAA and CASalt standards distinguish between “general business” education, professionalism, and other relevant education. Both put a maximum on the number of hours of general business education that may be counted towards meeting the overall standards. This does not mean that “general business” education is not relevant or important, but it acknowledges the actuary’s special obligation to keep up-to-date in specifically actuarial topics.

The exact line between “general business” and “other relevant” education depends to a large extent on details of the education. For example, the CECC agreed that a course in presentation skills or MS Word would be general business since neither is specific to actuarial work, while training in using catastrophe modeling software would be “other.” A course in

SAS could be general business or other, depending on the topics covered in the specific course. The actuary should consider how much documentation is needed in order to support that the education is relevant to improving actuarial skills or knowledge if it is claimed as relevant education.

The CIA does not place an explicit maximum on the number of “general business” hours that can be claimed but instead sets a minimum requirement for “technical hours.”

The AAA, CIA, and CASalt standards all distinguish between “professional” and other activities, putting a minimum on the hours of professional education. Hours related to professionalism will in general involve reading or reviewing standards of practice or similar topics. In general, education in business skills is not “professionalism,” but again, the actuary must use his or her best judgment in determining what to count and how to document the activity. For instance, the committee felt that training on legal and illegal (from a human resources perspective) interview questions should count as professionalism, but the training would need to be documented as such for the audit committee to determine that it is relevant. Simply documenting a course on human resources or interviewing in general may not be enough to be considered “professionalism.”

### Practical Examples of Relevant CE

**Example 1:** A CAS member serving on an exam committee where the material is already very familiar to the CAS member.

*The time spent on this committee probably does not meet the relevancy standards outlined above.*

**Example 2:** A CAS member serving on an exam committee where the CAS member is unfamiliar with a new topic, or where the CAS member is refreshing their knowledge on a topic studied in the past, and has to study and become familiar with the material.

*The time spent studying the new material probably meets the relevancy standards outlined above. Other time spent on the committee probably does not.*

**Example 3:** A CAS member attending a CAS Board meeting.

The time spent on CAS business probably does not meet the relevancy standards described above. Time spent studying technical presentations to the Board may meet the relevancy standards.

**Example 4:** A CAS member attending a general session at a conference presented by a pundit from a popular television news show and addressing current events.

*Depending on the content, this activity may or may not meet the relevancy standards described above.*

**Example 5:** A CAS member reading the *Economist*, *Wall Street Journal*, *Business Insurance* or *National Underwriter*.

*Depending on the content of the articles, this activity may or may not meet the relevancy standards described above.*

**Example 6:** A CAS member making a presentation on an actuarial topic.

*The time spent studying for the presentation may or may not meet the relevancy standards described above. The time spent delivering the presentation probably does not.*


### Implications for Documentation

The considerations above have two important implications for the CAS member in documenting compliance with whatever set of CE Standards the member is subject to. First, the member has the responsibility to ensure that all claimed CE meets the appropriate relevancy standard. Second, the documentation should identify the subject matter that makes the activity, or part of the activity, relevant. Many activities (e.g., serving on a CAS committee, attending a professional meeting, etc.) include both time that constitutes relevant CE and time that does not. In these cases, it is not sufficient to merely indicate the activity for CE documentation purposes. For example, it is preferable to document attendance at a CAS meeting by recording each session separately rather than simply recording attendance at the meeting.

### Summary of the CECC's first year of work

With the introduction of CAS continuing education standards in 2011 and our first audit of a sample of the CAS members, this has been a year for much thought and discussion on the part of our committee and CAS leadership. To summarize our work this year:

- 65 members' documentation logs were audited by the CAS staff and the CECC, both a random sample of the membership and all CAS Executive Council and elected Board members.
- All audited members were judged to have met their 2011 CE requirements, based on the standard they reported under, either national or CASalt.
- Many members reported more CE hours than the CECC ultimately recognized, but most members had significantly more hours than the minimum required, so this did not affect meeting the requirements. Common issues included:
  - Not appropriately limiting “business skills” hours to 3 per year (U.S. standard);
  - Not considering CE relevance of the activity;
  - Arithmetic errors.
- Many members' documentation as originally submitted did not include enough information for the CECC to make a determination of relevancy, and clarifying questions were asked in many cases before the final determination was made.

Updated CE FAQs, to address common areas of confusion that have been raised to date, are in development; look for them on the CAS website. We look forward to additional discussions with members to raise and answer questions around this important topic. 





# In Celebration of Volunteers: The CAS 2012 Volunteer Honor Roll

We are an association of people, professionals, and friends.

Since the founding of the CAS in 1914, volunteers have been the main life force sustaining the Society through its various dimensions of growth—in the examination process and in the variety of continuing education activities, as well as in supporting the sheer growth in membership. As a result, members of the CAS through their numerous volunteer activities essentially direct all phases of CAS operations.

In one particular year, 902 CAS members volunteered to fill 1,359 positions. An effort of this scale, which is quite typical, generates a continuous need for volunteers. Each year about a

third of these positions become available through normal rotation. These positions include the entire range of CAS activities: the examination committees, research and development activities, liaison representatives, and various program committees and speakers, who serve as faculty for these programs. We'd also like to thank AAA volunteers, meeting and seminar speakers, and Regional Affiliate program participants not listed here. We recognize that none of these activities can take place without the active participation of the many CAS volunteers and for this we thank you.

Roselyn M. Abbiw-Jackson  
Rachel A. Abramovitz  
Jason Edward Abril  
Yazeed F. Abu-Sa'a  
Shawna S. Ackerman  
Jeffrey H. Adams  
Karen H. Adams  
Stacy J. Adams  
Jeffrey R. Adcock  
Barbara J. Addie  
Marc J. Adee  
Avraham Adler  
Martin Adler  
Alex Rudolf R. Agatep  
Aadil A. Ahmad  
Hussain Ahmad  
Justin L. Albert  
Stephen A. Alexander  
Terry J. Alfuth  
Mark S. Allaben  
Craig A. Allen  
Ethan D. Allen  
Keith P. Allen  
Melanie Allred  
John P. Alltop  
Manuel Almagro  
Rocklyn Tee Altshuler  
Fernando Alberto Alvarado  
Brian C. Alvin  
Athula Alwis  
Timothy Paul Aman  
Denise M. Ambrogio  
Vagif Amstislavskiy  
John E. Amundsen  
Christopher T. Andersen  
Gwendolyn L. Anderson  
Kevin L. Anderson  
Kimberly Borgelt Anderson  
Mark B. Anderson  
Paul D. Anderson  
Scott C. Anderson

Bradley J. Andrekus  
Desmond D. Andrews  
David Michael Andrist  
Jennifer A. Andrzejewski  
Michael E. Angelina  
Robert A. Anker  
Jonathan L. Ankney  
Matthew L. Antol  
Deborah Herman Ardern  
Nancy L. Arico  
Rebecca J. Armon  
Steven D. Armstrong  
Richard T. Arnold  
Kelleen D. Arquette  
Elizabeth A. Arsenault  
Lawrence J. Artes  
William M. Arthur  
Nolan E. Asch  
Mohammed Q. Ashab  
Carl Xavier Ashenbrenner  
Martha E. Ashman  
Megan Laurissa Astudillo  
Joel E. Atkins  
David Steen Atkinson  
Yanfei Z. Atwell  
Lewis V. Augustine  
Sarah Jane Austin  
Guy A. Avagliano  
Craig Victor Avitabile  
Waswate Ayana  
William P. Ayres  
Farid Aziz Ibrahim  
Nathan J. Babcock  
Richard J. Babel  
Gregory S. Babushkin  
Silvia Bach  
John L. Baldan  
Jennifer Lynn Balester  
Matthew Ball  
Glenn R. Balling  
Robert Sidney Ballmer

Andra Catalina Ban  
Sophia Cyma Banduk  
Phillip W. Banet  
Emmanuel Theodore Bardis  
Rachel Radoff Bardon  
Katharine Barnes  
Shane Eric Barnes  
Rose D. Barrett  
Brandon Lee Basken  
David B. Bassi  
Angelo E. Bastianpillai  
Adam Bates  
Todd R. Bault  
Rick D. Beam  
Robert A. Bear  
Nicolas Beaudoin  
Amelie Beauregard-Beausoleil  
Michael Christopher Beck  
Allan R. Becker  
Esther Becker  
John A. Beckman  
Albert J. Beer  
Nathalie Begin  
Aaron J. Beharelle  
Saeeda Behbahany  
Anthony O'Boyle Beirne  
Stephen A. Belden  
Michael J. Belfatti  
David M. Bellusci  
George M. Belokas  
Mallika Bender  
Robert K. Bender  
Guillaume Benoit  
Abbe Sohne Bensimon  
Jeremy Todd Benson  
Cynthia A. Bentley  
Regina M. Berens  
Carolyn J. Bergh  
Sokol Berisha  
Jason E. Berkey  
Steven L. Berman

Susan Bermender  
Sebastien Bernard  
Raji Bhagavatula  
Sarah Bhanji  
Brian J. Biggs  
Jennifer L. Biggs  
Jonathan Bilbul  
Brad Stephen Billerman  
Chris M. Bilski  
Kevin Michael Bingham  
Rebekah Susan Biondo  
Martin Birkenheier  
Linda Jean Bjork  
Suzanne E. Black  
Wayne E. Blackburn  
Gavin C. Blair  
Francois Blais  
Jonathan Everett Blake  
Ralph S. Blanchard  
Robert G. Blanco  
Cara M. Blank  
Michael J. Blasko  
Michael P. Blivess  
Barry E. Blodgett  
Tony Francis Bloemer  
Carol Blomstrom  
Lynne M. Bloom  
Peter George Blouin  
Sharon D. Blumer  
Gary Blumsohn  
Neil M. Bodoff  
John Stephen Bogaardt  
Christopher David Bohn  
Raju Bohra  
LeRoy A. Boison  
Nebojsa Bojer  
Ann M. Bok  
James M. Boland  
Stephanie Jo Bolstridge  
Caleb M. Bonds  
John T. Bonsignore

James Parker Boone  
Joseph A. Boor  
David R. Border  
Peter T. Bothwell  
Amy S. Bouska  
Roger W. Bovard  
Lee M. Bowron  
Ishmealina M. Boye  
Thomas Leininger Boyer  
Jerelyn S. Boysia  
Christopher K. Bozman  
Edward G. Bradford  
David R. Bradley  
Lori Michelle Bradley  
Nancy A. Braithwaite  
Paul Braithwaite  
Betsy A. Branagan  
Erich A. Brandt  
Michael D. Brannon  
Donna D. Brasley  
Rebecca Schafer Bredehoeft  
Adam E. Bremberger  
Justin J. Brenden  
John R. Broadrick  
Sara T. Broadrick  
Linda K. Brobeck  
Kelli Ann Broin  
Tracy L. Brooks-Szegda  
Craig R. Brophy  
Jess B. Broussard  
Brian Z. Brown  
Lisa A. Brown  
Robert L. Brown  
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Jeremy Parker Pecora  
John R. Pedrick  
Bernard A. Pelletier  
Paul Pelock  
Tracie L. Pencak  
Clifford A. Pence  
Julia L. Perrine  
Julie Perron  
Christopher Kent Perry  
Daniel Berenson Perry  
Jason Pessel  
Julie A. Peters  
Steven Petlick  
Michael Robert Petrarca  
Joseph Lawrence Petrelli  
Anne Marlene Petrides  
Christopher A. Pett  
David M. Pfahler  
Jeffrey J. Pfluger  
Dianne M. Phelps  
Beverly L. Phillips  
George N. Phillips  
Mark W. Phillips  
Richard N. Piazza  
Mathieu Picard  
Daniel C. Pickens  
John Pierce  
Kim E. Piersol  
Joseph G. Pietraszewski  
Cedric Pilon  
Susan R. Pino  
Anthony J. Pipia  
Matthew D. Piser

Joseph W. Pitts  
Arthur C. Placek  
Etienne Plante-Dube  
Christopher James Platania  
Jayne L. Plunkett  
Dave Pochettino  
Felix Podgaits  
Igor Pogrebinsky  
Peter Victor Polansky  
Timothy K. Pollis  
Amber B. Popovitch  
Luke Ellis Porter  
Timothy Ray Porter  
Daniel P. Post  
Aaron Z. Potacki  
Derek Paul Pouliot  
David S. Powell  
Timothy J. Pratt  
Bill D. Premdas  
Virginia R. Prevosto  
Thomas M. Prince  
Warren T. Printz  
Mark Priven  
Arlie J. Proctor  
Melissa D. Pryor  
David S. Pugel  
Stephen Pulis  
John M. Purple  
Justin N. Pursaga  
Lovely G. Puthenveetil  
Alan K. Putney  
Joshua J. Pyle  
Junhua (Blanca) Qin  
Karen L. Queen  
Kenneth Quintilian  
John Bradley Raatz  
Jaishan Rajendra  
Joseph David Rakstad  
Christopher David Randall  
Arthur R. Randolph  
Nanxia Rao  
Laura Ann Rapacz  
Leonid Rasin  
Eric W.L. Ratti  
Peter S. Rauner  
Pamela Sealand Reale  
James E. Rech  
Brenda L. Reddick  
Katrina Andrea Redelsheimer  
Zia Rehman  
Ashley Arlene Reller  
Melissa A. Remus  
Sylvain Renaud  
John D. Renze  
John Dale Reynolds  
Michael J. Reynolds  
Andrew Scott Ribaud  
Adam Lee Rich  
Gregory S. Richardson  
Zoe F.S. Rico  
Elizabeth M. Riczko  
David C. Riek

Todd Richard Rio  
Karen Lynn Rivara  
Joseph L. Rizzo  
Dolph J. Robb  
Delia E. Roberts  
John P. Robertson  
Krista Kathleen Robinson  
Sharon K. Robinson  
Ezra Jonathan Robison  
Robert C. Roddy  
Beatrice T. Rodgers  
Juan Carlos Rodriguez Mayoral  
Jacob D. Roe  
Rebecca L. Roever  
Keith A. Rogers  
Kathryn Marie Rokosz  
Kevin D. Roll  
Charles A. Romberger  
Steven Carl Rominske  
A. Scott Romito  
Jay Andrew Rosen  
Deborah M. Rosenberg  
Sheldon Rosenberg  
Richard A. Rosengarten  
Scott I. Rosenthal  
David A. Rosenzweig  
Jason M. Rosin  
Gail M. Ross  
James P. Ross  
Sandra L. Ross  
Daniel G. Roth  
Richard J. Roth  
Robert Allan Rowe  
Stuart C. Rowe  
James B. Rowland  
Lydia Roy  
Ashley Carver Roya  
Ryan P. Royce  
Peter A. Royek  
William Paige Rudolph  
Nadiya Rudomino  
David L. Ruhm  
Kenneth W. Rupert  
Eric Ruppert  
Jason L. Russ  
Kevin L. Russell  
Michael Joseph Russell  
Stephanie Elizabeth Russell  
Frederick Douglas Ryan  
Thomas A. Ryan  
Shama S. Sabade  
Joseph J. Sacala  
John Christopher Sadloske  
Michael R. Sadowski  
Rajesh V. Sahasrabudhe  
Timothy Steven Sallay  
Kelly Ann Salmon  
Mitra Sanandajifar  
Manalur S. Sandilya  
James Charles Sandor  
Sandra C. Santomenno  
Frances G. Sarrel

Brett Andrew Saternus	Andrea Wynne Sherry	Charles Walter Stewart	Hemanth Kumar Thota
Stephen Paul Sauthoff	Margaret Tiller Sherwood	Paul-Andre St-Georges	Chris S. Throckmorton
Eric L. Savage	Junning Shi	Brian M. Stoll	Jennifer L. Throm
Joshua Stewart Sawyer	Yiping Shi	Christopher James Stoll	Lijia Tian
Letitia M. Saylor	Jeremy D. Shoemaker	Emily Ruth Stoll	John P. Tierney
Thomas E. Schadler	James S. Shoenfelt	Dara Marlene Stone	Phoebe A. Tinney
Jerome A. Scheibl	Bret Charles Shroyer	Edward C. Stone	Dovid C. Tkatch
Michael B. Schenk	Raymond Bond Shum	John Paul Stonestreet	Thomas C. Toce
Phillip F. Schiavone	Paul Silberbush	James P. Streff	Michael Toledano
Doris Y. Schirmacher	Martin M. Simons	Thomas Struppeck	Melissa Tomita
Sara E. Schlenker	Rial R. Simons	Paul J. Struzzieri	Peter Tomopoulos
Neal J. Schmidt	Kirsten M. Singer	Christopher J. Styrsky	Kyle W. Tompkins
Karen E. Schmitt	Jeffrey S. Sirkin	John Qiang Su	Michael L. Toothman
Karen L. Schmitt	Panayiotis George Skordi	Xiao-shu Su	Jennifer M. Tornquist
Matt J. Schmitt	Steven A. Skov	Yuchen Su	Christopher J. Townsend
Michael C. Schmitz	Joseph Allen Smalley	Zhongmei Su	Gary S. Traicoff
Thomas Schneider	David A. Smith	Jeffrey L. Subeck	Philip Traicus
Michael J. Scholl	Gina L.B. Smith	Christopher M. Suchar	Michael C. Tranfaglia
Parr T. Schoolman	Jason Smith	Maheswaran Sudagar	Jeffrey S. Trichon
Jonathan M. Schreck	Jeffery J. Smith	Lisa M. Sukow	Ethan Kenneth Triplett
Ronald J. Schuler	Jeremy C. Smith	Kelly Aline Sullivan	Adam James Troyer
Andrew J. Schuppska	Lee M. Smith	Kevin M. Sullivan	Michel Trudeau
Erika Helen Schurr	Lee Oliver Smith	Sean P. Sullivan	Queenie Wing Kan Tsang
Robert J. Schutte	Lleweilun Smith	Xiaowei Sun	Kai Lee Tse
Debbie Schwab	Robert K. Smith	Zongli Sun	Denny Tei Tuan
Jeffory C. Schwandt	Zander Smith	Brian Tohru Suzuki	Patrick N. Tures
Arthur J. Schwartz	Patricia E. Smolen	Leslie D. Svoboda	Turgay F. Turnacioglu
Genine Darrough Schwartz	Jared Smollik	Adam M. Swartz	Brian K. Turner
Nathan Alexander Schwartz	Halina H. Smosna	Beth M. Sweeney	Dustin James Turner
Joy A. Schwartzman	David C. Snow	Andrea M. Sweeny	George W. Turner
Lyndsey J. Schwegler	Kam Sang So	Timothy Delmar Sweetser	Steven L. Turner
Stuart A. Schweidel	Scott G. Sobel	Christopher C. Swetonic	Alexander J. Turrell
Susanne Sclafane	Anthony A. Solak	Adam D. Swope	Jerome E. Tuttle
Jeffery J. Scott	Jessica Elsinger Somerfeld	Chester John Szczepanski	Gail E. Tverberg
Karen Scott	David B. Sommer	Erica W. Szeto	Adam B. Tyner
Ronald S. Scott	Jiyang Song	Mark Taber	Matthew L. Uhoda
Sheri Lee Scott	John B. Sopkowicz	Christopher Tait	Alice M. Underwood
Suzanne Mills Scott	Carl J. Sornson	Mariane Takahashi	Joel A. Vaag
Rachel Marie Seale	Richard C. Soulsby	Wee Keat Kenny Tan	Eric L. Vaagen
Steven George Searle	Klayton N. Southwood	Wei-Chyin Tan	Sebastien Vachon
Alan R. Seeley	Michael D. Sowka	Caitlin E. Tatarzyn	Tracy Leslie Valentine
Ernest C. Segal	Sharon L. Sowka	Catherine Harwood Taylor	Tony A. Van Berkel
Stephen Ray Segroves	Joanne S. Spalla	Jane C. Taylor	John V. Van de Water
Shayan Sen	Michael P. Speedling	Megan Elizabeth Taylor	Chris John Van Kooten
Kaushika Sengupta	David Spiegler	Samantha M. Taylor	Kevin John Van Prooyen
Richard H. Seward	Mindy Y. Spry	David M. Terne	Oakley E. Van Slyke
Ahmad Shadman	Elisabeth Stadler	Karen F. Terry	Marina Vaninsky
Theodore R. Shalack	David Chan Stanek	Patricia A. Teufel	Jeffrey A. VanKley
Marc Shamula	Thomas N. Stanford	Dan Omer Tevet	Justin M. VanOpdorp
Vladimir Shander	Kevin D. Staples	Neeza Thandi	Marquis Jacob Varghese
Mark R. Shapland	Benoit St-Aubin	Alyssa Thao	Kanika Vats
Robert D. Share	Andrew Jon Staudt	Jonas F. Thisner	Trent R. Vaughn
Matthew D. Sharp	Tracey Ellen Steger	Anne M. Thomas	Gaetan R. Veilleux
Bonnie C. Shek	Mindy M. Steichen	Edward Daniel Thomas	Paul A. Vendetti
Clista E. Sheker	Christopher M. Steinbach	John Frank Thomas	Evgueni Venkov
Melissa Lillian Shelley	Samantha Elizabeth Steiner	Robert M. Thomas	Gary G. Venter
Quan Shen	Katherine Stelzner	Shantelle Adrienne Thomas	Steven J. Vercellini
Xiaoyu Sheng	Stephen R. Sten	Gordon C. Thompson	Mark Alan Verheyen
Brett M. Shereck	Julia Causbie Stenberg	Kevin B. Thompson	Victor Maximillian C. Victoriano
Harvey A. Sherman	Emanuel James Stergiou	Lori R. Thompson	Jennifer S. Vincent
Ollie L. Sherman	Ian P. Sterling	Robert W. Thompson	Brian A. Viscusi
Richard E. Sherman	Laura A. Stevens	Robby E. Thoms	Gerald R. Visintine

Steven M. Visner  
William E. Vogan  
Ryan Nolan Voge  
Cameron J. Vogt  
Oleg Voloshyn  
Allan S. Voltz  
Nathan K. Voorhis  
James C. Votta  
Mary Elizabeth Waak  
John E. Wade  
Linda M. Waite  
Clinton Garret Walden  
Amy R. Waldhauer  
Betty-Jo Walke  
Benjamin J. Walker  
Christopher P. Walker  
Glenn M. Walker  
Kathryn Ann Walker  
Rhonda Port Walker  
Tice R. Walker  
Robert J. Walling  
Lisa Walsh  
Mavis A. Walters  
Michael A. Walters  
Xuelian Wan  
Anping Wang  
Cong Wang  
Gary C. Wang  
HongTao (Heidi) Wang  
Huiniang Wang  
Jingtao (Ethel) Wang  
Min Wang  
Ping Wang  
Qing Janet Wang  
Qingxian Wang  
Rina Meng-Jie Wang  
Shaun S. Wang  
Xiaomin Wang  
Yao Wang  
Kimberley A. Ward  
Bryan C. Ware  
Gabriel Matthew Ware  
Kelly A. Wargo  
David W. Warren  
Monty James Washburn  
Jennifer M. Webb  
Lynne K. Wehmueller  
Thomas A. Weidman

Jennifer Lynn Weiner  
Scott P. Weinstein  
Robert S. Weishaar  
James R. Weiss  
Alfred O. Weller  
Elizabeth A. Wellington  
Mark S. Wenger  
Scott Werfel  
Geoffrey Todd Werner  
Katherine Therese Werner  
Jean Patti West  
Jo Dee Westbrook  
Christopher John Westermeyer  
Anna Marie Wetterhus  
Timothy G. Wheeler  
Charles Scott White  
Jonathan White  
Lawrence White  
Patricia Cheryl White  
Steven B. White  
Peter G. Wick  
John Spencer Wideman  
William B. Wilder  
Peter W. Wildman  
Ronald Harris Wilkins  
William Robert Wilkins  
Kendall P. Williams  
Rebecca R. Williams  
Shauna S. Williams  
Stephen C. Williams  
Catherine M. Wilson  
Chad P. Wilson  
Ernest I. Wilson  
Steven M. Wilson  
William M. Wilt  
John J. Winkleman  
Steve Winstead  
Erin Groark Winters  
Brant Wiperman  
Chad C. Wischmeyer  
Timothy L. Wisecarver  
Kirby W. Wisian  
Susan E. Witcraft  
Trevar K. Withers  
Benjamin T. Witkowski  
Susan K. Woerner  
Brandon L. Wolf  
David R. Wolf

Robert F. Wolf  
David S. Wolfe  
Kah-Leng Wong  
Ming Yi Wong  
Simon Kai-Yip Wong  
Windrie Wong  
Chunpong Woo  
Arlene F. Woodruff  
Dorothy A. Woodrum  
Mark L. Woods  
Patrick B. Woods  
Micah G. Woolstenhulme  
Joshua C. Worsham  
Stuart A. Wrenn  
Aaron A. Wright  
Cheng-Sheng Peter Wu  
Jennifer X. Wu  
Sandy Wu  
Xi Wu  
Xingzhi Wu  
Xueming Grace Wu  
Jie Xiao  
Jianwei Xie  
Wei Xie  
Zhijian Xiong  
Gang Xu  
Jianlu Xu  
Tong Xu  
Xinxin Xu  
Run Yan  
Linda Yang  
Ping Yang  
Yi-Chuang (Sylvia) Yang  
Yulai Yang  
Yuanhe (Edward) Yao  
Dominique Howard Yarnell  
Carolyn D. Yau  
Chung-Ye Scott Yen  
Kimberly Yeomans  
Ka Chun Yeung  
Shuk Han Lisa Yeung  
Vincent F. Yezzi  
Xiaoying Yi  
Sung Gyun Yim  
Jeanne Lee Ying  
Richard P. Yocius  
Edward J. Yorty  
Guanrong You

Joshua A. Youdovin  
Michael Scot Young  
Jiwei Yu  
Jonathan Kam Yu  
Ting Yu  
Yuan-Hung (David) Yu  
Bin Yuan  
Iva Yuan  
Ronald Joseph Zaleski  
George H. Zanjani  
Arthur J. Zaremba  
Michael R. Zarembor  
Navid Zarinejad  
Raisa Zarkhin  
Ruth Zea  
Doug A. Zearfoss  
Li Zeng  
Jin Zhang  
Junya Zhang  
Kun Zhang  
Li Zhang  
Qinnan Zhang  
Wei Zhang  
Yanwei Zhang  
Yi Zhang  
Yingjie Zhang  
Yue Zhang  
Zhenyong Zhang  
Haixia Zhao  
Qin Zhao  
Wei Zhao  
Chao Zheng  
Dong Zheng  
Jeffrey W. Zheng  
Jun Zheng  
Guo Zhong  
Kan Zhong  
Christina Tieyan Zhou  
Yu Zhou  
Li Zhu  
Xi Zhu  
John D. Zicarelli  
Zachery Michael Ziegler  
Adolphe Emery Zielinski  
Rita M. Zona  
Max Zormelo  
Barry C. Zurbuchen  
David E. Zurndorfer



# CAS 2012 Employer Honor Roll

The CAS is grateful for the support of employers who encourage their actuaries to volunteer their time and effort to the CAS. Here are two “snapshots” of these employers.

## Top Ten Employers with the Largest Number of Fellows Volunteering

Towers Watson  
Liberty Mutual Group  
Milliman, Inc.  
CNA Insurance Companies  
The Travelers Companies, Inc.

The Hartford  
Allstate Insurance Company  
PricewaterhouseCoopers LLP  
Insurance Services Office, Inc.  
Munich Re America, Inc.

## Large Employers with at Least 50% of Fellows Volunteering

Allstate Insurance Company  
CNA Insurance Companies  
Deloitte Consulting, LLP  
Ernst & Young LLP  
Farmers Insurance Group  
Insurance Services Office, Inc.  
KPMG, LLP  
Milliman, Inc.

Munich Re America, Inc.  
Pinnacle Actuarial Resources, Inc.  
PricewaterhouseCoopers LLP  
SCOR Reinsurance  
The Hanover Insurance Group  
Towers Watson  
Willis Re, Inc.

# 2012-2013 Society Partners Program Announced

**T**he Casualty Actuarial Society is pleased to announce the 2012-2013 Society Partners Program. This program is designed to help firms build and maintain year-round relationships with the influential group of insurance professionals who are CAS members. Firms participating in the program can carry out their marketing objectives while developing a unique relationship with CAS members and the actuarial profession as a whole.

In the 2012-2013 program year, the CAS offers the following new opportunities for Society Partners to market their products and services to CAS members:

**Meeting App**—A meeting app sponsorship is available for each event. When attendees access the app they will be taken to a landing page with Society Partners' company names, logos, and website links.

**InFocus Seminar**—Several sponsorship opportunities are available at this newly added event!

**Reduced fees**—A fee reduction is available for the final night dinner sponsorship at the Annual Meeting, which will be held at Walt Disney World. The dinner is at Epcot, and this memorable evening will conclude with a fireworks and light show.

Society Partners are firms who demonstrate a commitment to the CAS and its mission by making an annual pledge to support CAS activities. Society Partners are able to spend the amount pledged on a wide variety of sponsor, exhibitor, and advertising opportunities throughout the year. In return, Society Partners receive benefits commensurate with their investment level. This program provides year-long exposure and maximum flexibility by allowing firms to choose from and combine exhibitor and sponsor opportunities to suit their budget and marketing mix.


Society Partners benefit in two ways:

- Partners receive exposure to a focused audience through participation in individual events and activities of their choosing over a year.



- Partners receive exclusive benefits, including a 20% discount on the regular cost of individual sponsor, exhibitor, and advertising opportunities.

A Society Partnership runs for 12 months, from October 1 to September 30. To receive the exclusive benefits of this program, Society Partners must commit to a certain level of support at the beginning of the cycle.

To learn more about the 2012-2013 Society Partners program, see the online brochure at <http://casact.org/advertising/12PartnersBrochure.pdf>. 



# Academy Honors Ackerman as Outstanding Volunteer

Shawna Ackerman and two others have been awarded the American Academy of Actuaries Award for Outstanding Volunteerism, an award the Academy established in 2011 to honor Academy volunteers who have made single, noteworthy volunteer contributions above and beyond what is reasonably expected of an Academy volunteer.

Ms. Ackerman and the two other Academy volunteers, Mita Lodh and Mike Ward, received their awards in a special ceremony on October 15 during the Academy's Annual Meeting and Awards Luncheon, held near Washington, DC.

Ms. Ackerman is a consulting actuary for the California Earthquake Authority in Sacramento, California, and a member of the CAS Board of Directors. She was recognized for spearheading a multiyear effort that spanned all actuarial disciplines and resulted in the publication of a special report on actuarial soundness. The report provided a platform for engaging and educating policymakers and regulators about the meaning,

variations, and importance of the phrase "actuarial soundness."

In remarks during the ceremony, Academy President Dave Sandberg said, "The Academy benefits each year from the substantive contributions of more than 1,200 volunteers who are actively engaged in fulfilling its public policy and professionalism missions...

In their volunteer work for the Academy, Shawna, Mita, and Mike each contributed substantially to important Academy work, demonstrating a commitment to the profession and the public that won the admiration of the members and officers of the Academy." **AR**



*Shawna Ackerman*

## Highlights from the 2012 CLRS Reserves Prize Winners and Best Session Announced

Nearly 600 attended the 2012 Casualty Loss Reserve Seminar (CLRS), held September 5-7 at the Sheraton Denver Downtown Hotel in Denver, CO. The CLRS, sponsored each year by the American Academy of Actuaries, the Conference of Consulting Actuaries, and the CAS, is a very popular seminar. Following are some of the highlights from CLRS 2012.

### Reserves Prizes Awarded

Jessica (Weng Kah) Leong, Shaun Wang, and Han Chen won the 2012 Ronald Bornhuetter Loss Reserve Prize grand prize for their paper titled, "Back-Testing the ODP Bootstrap of the Paid Chain-Ladder Model with Actual Historical Claims Data." Ira Robbin was awarded second prize for his paper titled, "A Practical Way to Estimate One-Year Reserve Risk." Both papers are available in the 2012 Summer *CAS E-Forum*.

This prize commemorates the work of Ronald Bornhuetter (FCAS 1957) and is awarded to the author or authors of the best paper submitted in response to a call for papers regarding reserves, whenever the program is conducted by the Committee

on Reserves of the Casualty Actuarial Society.

### CLRS Best Session

Attendees at this year's CLRS voted the session "There is Probably a Risk-Focused Exam in Your Future. How Do You Deal With It?" as the "Best Session" of the seminar. Kris DeFrain of the National Association of Insurance Commissioners, Melissa Greiner of the Pennsylvania Insurance Department, and Craig Moore of Risk & Regulatory Consulting, LLC, each received a \$150 American Express gift card for their efforts in producing a top-notch educational session at the seminar.

### Recorded Sessions Available Online

If you could not attend the CLRS, or if you attended the seminar and missed some sessions, there are a handful of sessions now available through the University of CAS. Access to sessions is free for attendees; non-attendees can purchase individual sessions for \$25 per session or \$149 for all of the CLRS sessions. Visit the University of CAS for more details. **AR**

## Woodworking Craftsman

It all started about 30 years ago in an unfinished basement. Dave Chernick wanted storage space. Not being able to find exact pieces, and considering the cost of buying finished products, he custom made shelves inside the studs on the face of his stairs. This blossomed into a consuming hobby, mostly making gifts for family, friends, and himself. Not satisfied with the money he saved, Dave started milling his own wood about seven years ago. He has numerous birch trees on his Sister Bay, Wisconsin, property. Rather than burning them as firewood, he mills them into boards. The short life span of birch gives him a constant supply of large trees to mill. Moreover, birch is one of the best woods for spalting, the process where fungus and bacteria create fantastic coloration—browns, reds and blacks—in light woods, such as birch or maple.

Over time Dave ends up with logs from storm damage and from the dying older birch trees. He logs and mills the trees himself, using chain saws and milling jigs. After sawing the trees, he stacks the logs outside and lets the fungi and bacteria work on the wood. After sufficient time (two years for birch including two full winters), he dries the wood and mills it into boards. Only then does he learn if the wood is spalted well, not enough, or simply has turned into muck.

“Spalting the wood, like actuarial science, is more of an art than a science,” Dave muses. The main variables are where he stores the logs and how long he exposes them to the elements before milling them into boards. Dave discovered that logs that are stacked in the woods tend to spalt and also turn to muck fairly quickly. Some of his earliest attempts yielded very little usable wood after a year. Recently, he has been stacking the logs in an open area exposed to a lot of sun. He has milled these logs at one-, two-, and three-year intervals. He gets very little spalting after a year, but significant spalting after three years. Nevertheless, parts of the logs simply disintegrate. Now he mills after two years. If the first log has little or no spalted areas, then he might leave the rest of the stack for another year. He finds it kind of a hit-or-miss process. Currently, he has a stack of ash logs for the first time. He plans to let these spalt for a couple of years and test the results.

Along with experimenting with spalting wood to produce unique pieces, woodworking gives him great satisfaction. Dave has all the necessary tools to create the finished products himself, with the minor exception of things like dowels or finished pieces that are too time-consuming to make. Among the various items he has produced are coffee tables, cabinets, picture frames and some “fun things” for his granddaughter. He always has some project underway in his workshop in Waukesha. Dave’s most satisfying project is a bar cabinet. An intricate piece with lathe work on the bottom and all sorts of different joinery, it has glass doors, regular cabinet doors, glass shelves, and some detail on the top. Currently, he is working on a set of seven large picture frames, squaring northern cedar to make a picnic table for his son, and is making a child’s coat rack for his granddaughter.



*Hard at work: Dave Chernick milling wood without the jig.*





*Logs in spalting process go from this...*

Dave is also teaching his youngest son how to use all the machinery. With Dave's help, his son has finished a coffee table out of rough-sawn hickory, and made a cribbage board in the shape of Wisconsin's Door County peninsula. They are currently working on a freestanding bar using all the different wood that has been milled from the properties.

Dave devotes as much time as he can to his hobby. He tries to spend a few hours during the week after work and then more on the weekends. He intends to spend much more time with it when he retires. He finds that there is a relationship to geometry in the work. Angles, joints, and precision are essential to woodworking. In the milling process, the boards must be cut on plane, so set up is the key. Despite working with potentially dangerous tools, he has suffered no major injuries thus far, although he once stuck a chisel into his hand, requiring 15 stitches. "Chisels are very sharp."

David Chernick is a consulting actuary with Milliman in Brookfield, Wisconsin. [AR](#)



*...to this.*



*A finished product: A puzzle table crafted by Dave Chernick.*

### **NAP Needs Your Input!**

Do you have, or know a CAS member who has, an interesting nonactuarial pursuit? If so, we'd like to hear from you. Send an e-mail to [ar@casact.org](mailto:ar@casact.org) and let us know what you do in your off-hours.

# 2013 ERM Symposium to Return to Chicago

Coming to Chicago, April 22-24, 2013, the 2013 ERM Symposium will explore how risk professionals use enterprise risk management (ERM) to meet their organizations' challenges, including applications in nontraditional areas of ERM.


The ERM Symposium Planning Committee is designing a scientific program featuring:

- Case studies of successful and unsuccessful attempts to use ERM to meet today's challenges, including best practices for embedding ERM into an organization's culture.
- Technical and quantitative presentations of a practical nature that will outline approaches to specific ERM implementation challenges, with ideas that can be applied immediately.
- Presentations of a more theoretical nature, either of general interest to ERM practitioners or regarding specific ERM issues.

ERM Symposium sessions will address issues, present applications, and provide insights across a broad spectrum of industries, and will foster cross-pollination and collaboration of ERM professionals without regard to industry, sector, or geography.

The ERM Symposium will also offer ample networking opportunities to renew and expand your list of ERM contacts and an exhibit hall in which service providers can demonstrate their ERM capabilities and knowledge.

Please visit the ERM Web Site for more information and to register.

*The ERM Symposium is sponsored by the Society of Actuaries, Casualty Actuarial Society, Joint Risk Management Section, and Professional Risk Managers' International Association, in collaboration with the Canadian Institute of Actuaries, Asociacion Mexicana De Actuarios, Enterprise Risk Management Institute International, and Colegio Nacional de Actuarios. *

# Earn Your End-of-Year CE with CAS Webinars and Session Recordings

If you are looking for ways to gain continuing education (CE) credit, CAS Webinars and recordings of past sessions are exceptional values. Attending a CAS Webinar or listening to a recording are great ways to get organized CE credit without leaving your office.


Since their start in 2007, CAS Webinars have consistently been well-attended and well-received, garnering positive reviews. The CAS Webinar Committee works with presenters to develop educational opportunities that are timely and useful—all at a reasonable cost. The CAS usually conducts 12 webinars a year.

Since 2009, CAS has been recording a number of sessions at every national CAS meeting and seminar. These include:

- Ratemaking and Product Management Seminar
- Spring Meeting

- Seminar on Reinsurance
- Casualty Loss Reserve Seminar
- In Focus Seminars
- Annual Meeting
- Plus, all webinars

In 2012 alone, over 175 sessions have been recorded. These recordings are available to the particular meeting or seminar attendees at no charge or for only \$25 each or \$99 (or \$149) for all the recordings at one meeting or seminar.

Be sure to consider the CAS Webinars and recordings when planning your continuing education for the remainder of 2012 and in the future! 

# 2013 Ratemaking and Product Management Seminar Heads to California

**R**egister for the 2013 Ratemaking and Product Management (RPM) Seminar, scheduled for March 11-13 in Huntington Beach, CA.

The RPM Seminar Planning Committee is reviewing the 2012 seminar feedback to make improvements for next year's event. In 2013, the planning committee plans to add new workshops and bring back popular workshops on predictive modeling, product development, and R. Some of the fantastic sessions from 2012 and more of the popular roundtable discussions are also on the agenda. As always, much of the seminar's lineup will feature the latest material and topics.


**Exhibitors**—Don't miss the chance to showcase your products and services at the RPM Seminar. Space is limited, so act today! Contact Megan O'Neill at [moneill@casact.org](mailto:moneill@casact.org) for more information.

The RPM Seminar offers a wide range of continuing education opportunities for actuaries, underwriters, and other insurance professionals, including practical hands-on sessions for attendees of all experience levels. Sessions have been designed for both the novice

and the experienced professional.


Over 50 different concurrent sessions will be offered during the seminar with multiple sessions offered within the following tracks:

- Regulatory
- Personal Lines
- Predictive Modeling
- Implementation Issues
- Workers Compensation
- Product Management
- Data Management
- Commercial Lines
- Professionalism
- Rate of Return

Attendees can choose to come early on March 11 for a full day of workshops, designed to provide a more in-depth, focused, creative, and highly interactive learning environment. A separate registration fee is required, which includes a continental breakfast, luncheon, and refreshments. 

## WANTED: Topics for CAS Webinars

The CAS Webinar Committee works with presenters to develop educational opportunities that are timely and useful, all at a reasonable cost. If you would like to recommend topics for future webinars, please send an email to [meetings@casact.org](mailto:meetings@casact.org). We'd love to hear from you!

Attending webinars is a great way to get organized continuing education credit without leaving your office. Many webinars focus on timely professionalism topics. The CAS Web Site, as well as the weekly emails, will have information on registration and webinar content. Be sure to consider the CAS webinars when planning your continuing education for 2012 and 2013! 



# Actuarial Foundation Update



THE ACTUARIAL  
FOUNDATION

## Foundation Awards 50 Scholarships

Engaging the next generation of actuaries, the Foundation awarded 50 talented and deserving students scholarships for the 2012-2013 school year. The Foundation awarded 32 Actuarial Diversity Scholarships, 14 John Culver Woody Scholarships, two Caribbean Actuarial Scholarships, and two *Actuary of Tomorrow* - Stuart A. Robertson Memorial Scholarships. Meet all of the scholarship recipients at <http://www.actuarialfoundation.org/programs/actuarial/scholarships.shtml>.

## New Reimbursement Program for Career Changers

The Foundation is proud to announce *Actuary—A Career Change*: The Elizabeth M. Mauro Reimbursement Program. This new actuarial exam reimbursement program was established in memory of Elizabeth M. (Liz) Mauro to honor her dedication to becoming an actuary following several years in another profession. This program is designed specifically to assist career-changers on the road to becoming an actuary with the examination process. Learn more by visiting <http://www.actuarialfoundation.org/programs/actuarial/ElizabethM.Mauro.shtml>.

## Want to Wow the Middle School Class?

Have you ever been asked to give a presentation during a career day or other event at a local middle school but weren't sure how to talk about the actuarial profession or engage the students? The Actuarial Foundation's *Classroom Guides for Actuaries* can help. The Foundation has developed a guide for each of the six installments in its *Expect the Unexpected With Math*® series that explains how to use these fun classroom materials to help students see the real-world relevance of math and how it is used in professions, including actuaries. View all the materials and guides at [http://www.actuarialfoundation.org/programs/youth/actuary\\_guide.shtml](http://www.actuarialfoundation.org/programs/youth/actuary_guide.shtml)—then volunteer to present these lessons at a school near you!


## New Curriculum Challenges Students to Think Like an Actuary!

The Actuarial Foundation is proud to launch the Web version of an exciting new curriculum, *Probability & Statistics: Modular Learning Exercises*. This new resource is aimed at engaging accelerated high school math students while also introducing them to the core principles of probability and statistics. Students take on the role of an actuary as they help an insurance company estimate the risk of storm activity and calculate potentially costly damages.

Take a look at this new curriculum at <http://www.actuarialfoundation.org/programs/youth/hs-stats.shtml>.

## Recognizing Forward Thinking in the Profession

James Pierlot and Faisal Siddiqi, FSA, FCIA, are the winners of the 2012 John Hanson Memorial Prize for their paper, "Legal for Life: Why Canadians Need a Lifetime Retirement Saving Limit," published by C.D. Howe Institute. Read their winning paper at <http://www.actuarialfoundation.org/programs/actuarial/hanson.shtml>.

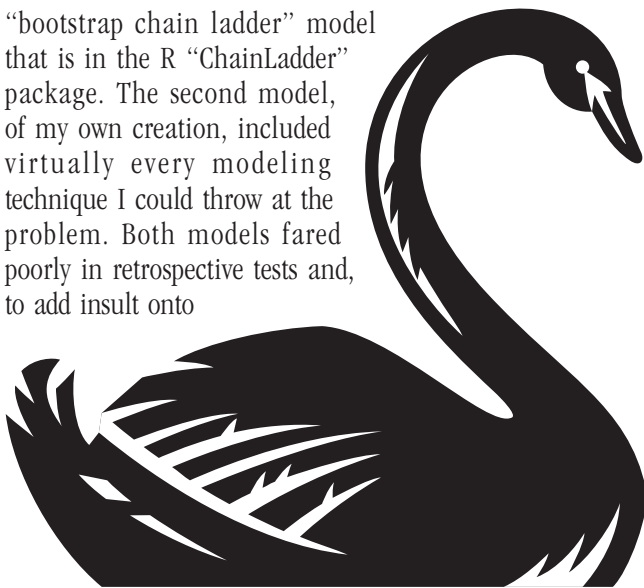
For his efforts in raising the actuarial profession's profile in the public domain, Jim Toole, FSA, MAAA, CERA, was awarded the 2012 Wynn Kent Public Communication Award. Visit [http://www.actuarialfoundation.org/programs/actuarial/wynn\\_kent\\_award.shtml](http://www.actuarialfoundation.org/programs/actuarial/wynn_kent_award.shtml) to learn more about the award. 

# Who Can See the Black Swans?

**R**egular readers of this column will know that I have been a proponent of large-scale retrospective testing of stochastic loss reserve models.<sup>1</sup> With the dozens of papers on stochastic loss reserve models out there, we need to take the time to figure out which, if any, of these models can be used to accurately predict the distribution of outcomes. For those of us involved in modeling loss reserves, a depressing possibility is that none of the models may work. In our ever-changing insurance environment, a regular stream of “black swan” events may frustrate our efforts to predict the distributions of future outcomes.

In spite of this possibility, I have been trying to find a model that predicts the distribution of outcomes for a large number of triangles from the CAS Loss Reserve Database. What I have uncovered so far suggests some interesting conclusions. So rather than my usual column, consisting of charts, equations and R code, this column will discuss some high-level implications of my work to date on this subject.

In our 2011 *E-Forum* paper, Peng Shi and I introduced the CAS Loss Reserve Database and tested two stochastic loss reserve models on incremental paid loss reserve triangles.<sup>2</sup> The first model was the mainstream “bootstrap chain ladder” model that is in the R “ChainLadder” package. The second model, of my own creation, included virtually every modeling technique I could throw at the problem. Both models fared poorly in retrospective tests and, to add insult onto



injury, when we compared the performance of the expected results to the performance of the reserves that were actually posted, we were soundly beaten.

Standard loss reserving practices involve looking at many different models, and both paid and incurred loss reserve triangles. In spite of my long-held belief that paid loss triangles were the most important data (real money changing hands, less vulnerable to changes in case reserving practices, etc.), I decided to look at incurred loss triangles. An immediate consequence of this decision was to use cumulative loss triangles rather than incremental loss triangles. Negative incremental losses are problematic in most stochastic loss reserve models. They are rare enough in paid Schedule P triangles to ignore. But they are much more common in incurred triangles, and so I cannot ignore them. Because of this, I decided to work with cumulative incurred loss triangles.

The results of this inquiry are in a paper I published in this summer's *E-Forum*.<sup>3</sup> A high-level summary of the results is as follows: First, the Mack model significantly under-predicts the variability of loss reserve outcomes. By adding a number of features designed to increase the variability of the predicted outcomes, I was able to come up with a Bayesian model that predicted the distribution of the outcomes for a sample of 200 loss reserve triangles with a confidence level of 95%.

Now comes the interesting part. I then applied the very same model to cumulative paid loss triangles, with the result that they failed to predict the distribution of outcomes in a pattern similar to what we reported in the Meyers-Shi paper mentioned above.

One possible conclusion from this work is that, yes, there are changes in the insurance environment that are not observable in the paid data triangles. However, the claim adjusters who set case reserves do see the changes and use this information to reflect these changes in their estimates. A successful validation based on incurred data and the failure of three separate models based on paid data to validate lend credibility to the adage, “It is more important to use the right data than the right model.” As a former outspoken advocate of using paid incremental data, I have had to endure a number of “I told you so” comments from

**Brainstorms**, page 36

<sup>1</sup> See, for example my May 2011 column at <http://www.casact.org/pubs/actrev/may11/Brainstorms.pdf>.

<sup>2</sup> “The Retrospective Testing of Stochastic Loss Reserve Models,” *CAS E-Forum*, Summer 2011. <http://www.casact.org/pubs/forum/11sumforum/Meyers-Shi.pdf>.

<sup>3</sup> “The Leveled Chain Ladder Model for Stochastic Loss Reserving,” *CAS E-Forum*, Summer 2012. <http://www.casact.org/pubs/forum/12sumforum/>.

# Take Advantage of Online General Business Skills Education


In July 2012, the CAS partnered with BizLibrary to provide members with online General Business Skills Training.

BizLibrary is the nation's leading online training and e-learning provider for small- and mid-sized organizations. This partnership will provide CAS members with affordable and flexible solutions for training that enables professional and personal growth. The BizLibrary catalog includes a variety of course titles and types, including e-Learning courses, streaming video, and video/DVD access, on topics such as:

- Communication
- Management & Supervision
- Leadership Development
- Strategic Planning
- Change Management

- Problem Solving
- Collaboration
- Time Management
- Team Building
- Emotional Intelligence

CAS members\* receive a 10% discount off the retail price: \$80 for a single course from the e-Learning Library, \$262 for five courses, \$279 for 10 courses, or \$304 for 20 courses. For streaming video courses, the member prices are: \$54 for a single course, \$161 for five courses, \$179 for 10 courses, and \$199 for 20 courses. Online courses are generally scheduled for 60-90 minutes in length.

*\*Open to members and non-members in the U.S. and Canada only. More international locations may be added later. *

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## Brainstorms, From page 35

many actuarial colleagues.

However, I was not alone in using paid data. The popular ODP/Bootstrap models are usually based on incremental paid loss triangles. As I mentioned before, incremental incurred loss triangles are problematic due to the presence of frequent negative incremental losses. Unless it can be demonstrated that these models can work with incurred data, their usefulness is limited.

There is an important qualification to these results. They use only the information present in the data reported in Schedule P. All probabilities are conditional on the information given. I have

talked with many experienced reserving actuaries who stress that there is a lot of relevant information to be gained by talking with claims departments and “getting to know the insurer’s business.” I agree with all of this. The careful consideration of this additional information should lead to better reserve estimates. To get the distribution of outcomes, it should be possible to introduce this additional information into Bayesian models discussed above by modifying the prior distributions.

There is room for debate on all these conclusions and on this column in particular, I hope to hear from interested readers. 

# The CAS Legacy

## Readers, CAS Members: You Finish the Story

In September I attended the CAS leadership meeting in Chicago. Among the topics was the history of the CAS and what the Society had accomplished in its first hundred years. Someone mentioned an interest not so much in the first hundred years, but in what our second hundred years would bring.

Later, as I was driving home in my car, a Pontiac, I got to thinking about all of the companies, brands, and organizations that were at one time ubiquitous and have now vanished. This phenomena is a bit more obvious to me, since I live near Detroit where automotive brands have come and gone, some of them disappearing after a long existence. The very car I drive is from a brand founded in 1926 that ceased production in 2009. Oldsmobile was started even earlier, in 1897, and disappeared in 2004. I used to drive to work past the American Motors headquarters building, which is now a bank and office building. Also gone are Mercury, Saturn, and other brands.

Remember Montgomery Ward? It started out in 1872 as a mail-order business catering to rural customers. People in remote parts of the country could purchase goods previously only available in large cities. In its day, it was as revolutionary as the Internet is today. In 1926 it expanded into retail brick and mortar stores, but failed to keep up with its competitors and, after a number of takeovers, exited the scene in March 2001.

More recently, Lehman Brothers declared bankruptcy in 2008. It was founded in 1850. The list goes on and on. You might have caught the headline earlier this year about Atlantic Mutual:

SAN FRANCISCO (MarketWatch)—Atlantic Mutual Insurance Co. managed to pay out claims when the legendary Titanic passenger liner sank in April 1912, but the insurer couldn't survive a wave of workers' compensation claims, industry publication BestWire reported Friday.

**We know what causes insurance companies to go out of business...But what could cause an organization such as ours to cease to exist?**

The company was placed into liquidation and New York's superintendent of insurance was appointed liquidator on April 27, [2011] according to the website of the New York Liquidation Bureau.

Atlantic Mutual Insurance was incorporated under the laws of the state of New York on April 11, 1842. A week after the RMS Titanic hit an iceberg and sank in April 1912, the insurer paid \$100,000 in hull coverage, according to BestWire, part of insurance rating agency A.M. Best.<sup>1</sup>

The actuarial profession withstood harsh criticism in 2003 when the rating agency Fitch placed blame for the upward development in loss reserves on a failure in the actuarial process.


Standard and Poors suggested that actuaries had played at best a passive, and perhaps an active role in companies' suppression of their actual results. For a good summary of this topic see Mary Frances Miller's "From the President" column, "Are You Part of the Solution?" (*Actuarial Review*, February 2004).

Yet another *AR* article, "International Actuaries Address Concerns over Profession's Integrity and Credibility" (February 2005), outlines additional assaults on our profession in the international arena.

We know what causes insurance companies to go out of business: inadequate rates, inadequate loss reserves, failed reinsurance, catastrophes, and more. But what could cause an organization such as ours to cease to exist?

Just because the CAS has been around a long time, doesn't guarantee it will be around in the future. We have weathered storms before, but now our exclusivity in the U.S. is being challenged by other groups. So why should the CAS still exist in 50, or even 20 years?

This editorial is shorter than normal because I want you to finish it. Where do you think the CAS *should* be in 5, 10, or 20 years? And where do you think we *could* be?

I would like to hear your answers. Your leadership needs to hear your answers as well. 

<sup>1</sup> [http://articles.marketwatch.com/2011-05-06/markets/30808871\\_1\\_commercial-insurance-insurance-rating-agency-comp-claims](http://articles.marketwatch.com/2011-05-06/markets/30808871_1_commercial-insurance-insurance-rating-agency-comp-claims)

## Advertisement

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Actuarial Recruitment

### Our Company

**Ezra Penland Actuarial Recruitment** conducts the industry's leading actuarial salary surveys and employs an exceptional actuarial recruiting staff, placing all levels of actuaries. Our goal is to be the top actuarial recruitment firm in the world while serving the long-term needs of clients and actuarial candidates.

### Our Partners

Founding partners Sally Ezra and Claude Penland, ACAS, MAAA, have over 35 years of combined industry experience.

**Sally Ezra** (sally@EzraPenland.com) has spent nearly two decades recruiting actuaries, developing strong professional relationships and a vast network of clients—clients who value her commitment, resourcefulness, her personal attention, and her high level of professional ethics. Sally knows and serves the domestic, offshore, and international markets. She works with all levels of actuaries, from students to Fellows, and has placed senior-level actuaries, chief actuaries, and consulting firm practice leaders—and she genuinely enjoys guiding actuaries through their careers. Sally has published articles in several actuarial and professional publications and has participated in round table discussions and interviews. She attends a wide variety of professional, SOA, and CAS functions each year.

**Claude Penland** (claudio@EzraPenland.com) has over 20 years' experience as a casualty actuary and as a Web strategist for actuarial recruitment organizations. Claude has written many articles and presentations, available at [EzraPenland.com/publications](http://EzraPenland.com/publications), and regularly

contributes to U.S. and international periodicals on actuarial recruiting and online social networking issues. Claude has worked as a property & casualty actuary with two global insurance companies and a leading international consulting firm. His responsibilities included commercial lines and specialty lines pricing/reserving, alternative risk solutions, latent risk reserving, financial modeling, and supervisory duties.

### Our Salary Surveys

We publish state-of-the-art, industry-standard, U.S. actuarial salary surveys at [EzraPenland.com/salary](http://EzraPenland.com/salary). These surveys cover consulting, reinsurance, insurance, and all other employers of actuaries, separately. All examination levels and credential levels are considered, in one-year experience increments. Base salary and paid bonus actuarial compensation data is compiled by Claude Penland himself.

### Our Website

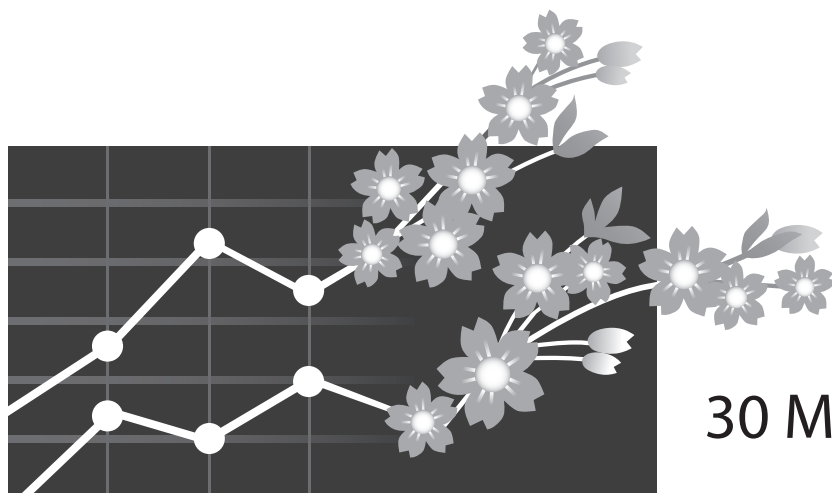
EzraPenland.com offers much more than a sizeable number of jobs postings. Visit these helpful links:

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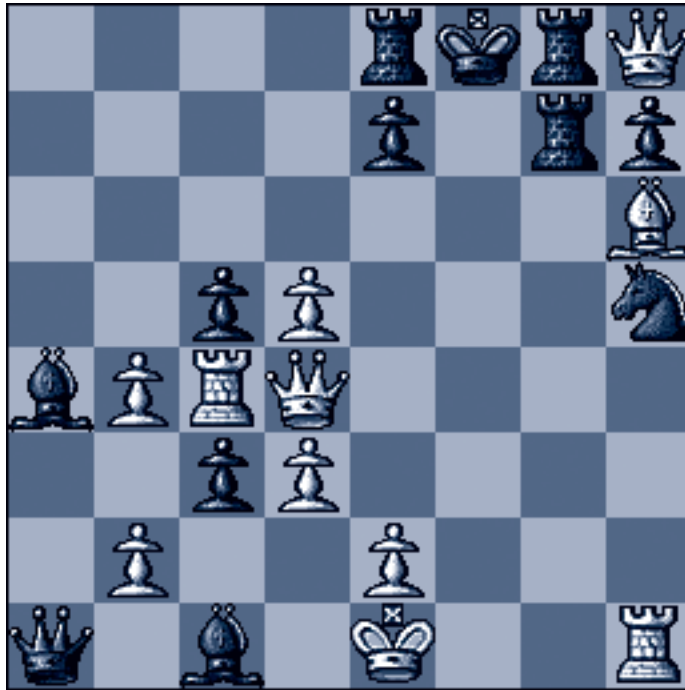
[www.ICA2014.org](http://www.ICA2014.org)



# Equal Positions?

Tom Struppeck offers the following strange chess problem.

You visit a chess tournament and find this position at two different tables:



Know the  
answer? Send  
your solution to  
[ar@casact.org](mailto:ar@casact.org).

At both tables it is White's move, and you are looking at the table from White's side.

At one table White is quite happy and Black is dejected. At the other table Black is quite happy and White is dejected. These reactions are quite rational. Explain this puzzlement.

## Equal Sums?

Apparently the wording of the previous puzzlement was a bit confusing. We asked readers, "Pick 10 distinct integers from 1 to 100. Are there two disjoint subsets of these 10 integers that have the same sum?"

Most solvers interpreted this the way we intended, which was—for *any* set of 10 distinct integers from 1 to 100, are there *always* two nontrivial disjoint subsets that have the same sum?

David Uhland notes that there are  $2^{10} = 1,024$  subsets of the 10 integers, and so 1,023 nonempty subsets. The sums of the nonempty subsets cannot be less than 1 or more than  $91 + 92 + \dots + 100 = 955$ . So, by Dirichlet's box principle (a.k.a. the pigeonhole principle), at least two of the 1,023 subsets must have the same sum. Delete any elements in common from both, and we will have two nonempty disjoint subsets with the same sum.

David also notes that for the set of seven integers  $\{1, 2, 4, 8, 16, 32, 64\}$ , no two nontrivial disjoint subsets have the same sum by the uniqueness of binary expansions of integers. He also found a set of eight integers "using the 'greedy' algorithm" for which no two nontrivial disjoint subsets have the same sum, namely  $\{100, 99, 98, 96, 93, 87, 76, 56\}$ . Neither he nor I have proven, nor found, a counterexample to the conjecture that for any set of nine distinct integers between 1 and 100, there must be two nontrivial disjoint subsets with the same sum.

Given the way we worded the puzzlement, Tom Struppeck observed that the null set is disjoint from itself, so two copies of the null set are disjoint subsets with the same sum!

I also received solutions from Kyle Bartee, Adam Capulong, Bryn Clarke, Nick Hartmann, John Jansen, Rob Kahn, Ignace Kuchazik, David Oakden, Yiannis Psiloyenis, Brad Rosin, Eric Savage, Steffen Siegel, David Skurnick, Rob Thomas, and Jerome Tuttle. 

## Price Optimization in North America: Myth vs. Reality

### WHAT IS DRIVING THE RAPID ADOPTION OF PRICE OPTIMIZATION?

Companies that adopt price optimization realize substantial financial benefits. These companies can see improvement of 1-4 points in the combined ratio and/or as much as 10-20% of a lift in new business conversion rates.

### WHAT ARE SOME OF THE MISCONCEPTIONS ABOUT PRICE OPTIMIZATION?

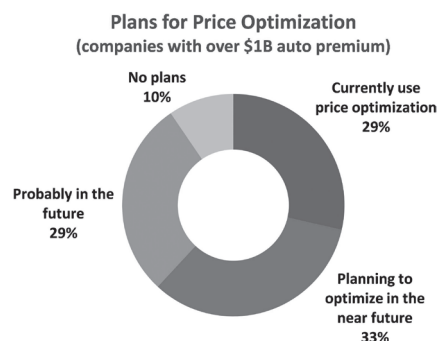
There are many myths about price optimization. One common misconception, for example, is that companies need a huge number of observations to build robust demand models. Our experience shows that in most cases as few as fifty to a hundred thousand observations are enough to construct robust models of consumer demand.

You can read about additional myths and understand the market realities by downloading our whitepaper at [www.earnix.com/pricing-myths](http://www.earnix.com/pricing-myths).

### WHICH INSURERS ARE USING PRICE OPTIMIZATION IN NORTH AMERICA?

A survey conducted by Earnix shows the adoption of price optimization by insurers in the United States and Canada is well underway. Among companies with over \$1B in auto insurance premium, 29% of the survey respondents currently use price optimization, while an additional 33% are planning to use it in the near future. These numbers match up with what we are seeing first hand in the field.

You can download the results of the survey at [www.earnix.com/auto](http://www.earnix.com/auto).



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## Actuarial Organizations Release Phase 1 of Climate Change Project

**H**ow climate change will affect society is a complex question, and the answer depends on the temporal and spatial scales over which one is concerned, the entities of interest, judgment criteria, and the desired level of certainty. Assessing the potential impacts of climate change on insurance is similarly complex. In addition, climate change—given its potential for systemic impact—can dramatically alter the risk management landscape.

The Casualty Actuarial Society, Canadian Institute of Actuaries, Society of Actuaries, and the American Academy of Actuaries' Property/Casualty Extreme Events Committee have responded to this emerging risk by collaboratively commissioning committees to recommend, support, and perform research on climate change and assess the potential risk

management implications for the insurance industry.

The Casualty Actuarial Society's Climate Change Committee is the parent committee of the Climate Index Working Group (CIWG). The report, "Determining the Impact of Climate Change on Insurance Risk and the Global Community" is the product of Phase I of a multi-phase project, which was commissioned by the actuarial organizations and prepared by Solterra Solutions, with input from the CIWG.

Phase I is a synthesis of a vast and rapidly growing body of scientific knowledge on climate change, with a focus on potential impacts to society and the insurance industry. The CIWG fostered collaboration among the representatives of the various actuarial societies and the climate scientists at Solterra Solutions to create the report, which is now available for download through the CAS website. [AR](http://www.casact.org)

# Now That's What I Call Reserving: Greatest Hits of the Actuarial Consultant

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his quarter's submission is from a guest humorist, Chris Chirico, an actuarial analyst with Actuarial Solutions in Bohemia, New York. I like his list because it involves music and is creative, funny and relevant. Well done, Chris!

Let this serve as a reminder and a challenge to any other potential humor contributors—send in those funny or quirky ideas, stories, and lists. [AR](#)

TOP 20		
Rank	Title	Artist
1	Quit Playing Games With My LDFs	Backstreet Boys
2	Don't Fear the #REF!	Blue Öyster Cult
3	A Conservative State of Mind	Billy Joel
4	My Funny Ferguson	Ella Fitzgerald
5	Bornhuetter Was a Friend of Mine	The Killers
6	I'm FCAS and I Know It	LMFAO
7	Project Me Maybe	Carly Rae Jepsen
8	Smooth Interpolator	Sade
9	Like a Rolling Analysis	Bob Dylan
10	Losing My Assets	REM
11	Under the Central	Red Hot Chili Peppers
12	(Everything I Do) I Do It For My Billable Rate	Bryan Adams
13	Where the Streets Have No Trend	U2
14	Data Out of Hell	Meatloaf
15	Sweet Lifetime Benefit of Mine	Guns N' Roses
16	Teardrops on My Spreadsheets	Taylor Swift
17	#NAME?	Goo Goo Dolls
18	What Doesn't Kill You Makes You PTD	Kelly Clarkson
19	Forecast You	Cee Lo Green
20	N.C.C.I.	Village People





# 2013 CAS Trust Scholarship Program

**T**he CAS Trust Scholarship Committee is now accepting applications for the 2013-2014 school year. The objective of the scholarship is to further students' interests in the property/casualty actuarial profession and to encourage the pursuit of the CAS designations.

## **Eligibility—Applicants must meet all requirements to be considered:**


- Are a U.S. or Canadian citizen or hold permanent resident visa.
- Currently attend a U.S. or Canadian college or university as a full-time student and continuing as a full-time student at a U.S. or Canadian college or university in the 2013-2014 academic year.
- Have sat for at least one actuarial exam by March of 2013. • Demonstrate high scholastic, mathematical aptitude, and communication skills.

- Have a strong interest in the casualty actuarial profession. Preference will be given to applicants who have not yet won the CAS Trust Scholarship.

## **Applicants must submit the following:**

- The four-page CAS Trust Scholarship application and attached essay.
- Two recommendation letters included in the application, preferably completed by internship supervisors, instructors or advisors at the applicant's educational institution who know the applicant well (only two recommendation letters will be considered).
- A current official transcript.

*\*Incomplete applications will be disqualified without any consideration to partial information received.*

**Completed applications are due by *March 1, 2013*. Winners will be notified of award decisions by *May 24, 2013*.** 

**Know a deserving candidate? Scholarship applications for the 2013-2014 school year are now available at [www.BeAnActuary.org](http://www.BeAnActuary.org)**

## 3 Steps to Cut Down on Unqualified Applicants

1. **Reduce dependence on mass job boards** that deliver a flood of unqualified applicants.
2. **Create prescreening questions** through your applicant tracking system or directly through the CAS Career Center.
3. **Use niche boards like the CAS**, which put your job in front of ONLY qualified candidates.

**Find Your Next Candidate at the CAS Career Center!** <http://careers.casact.org/home/> 







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**CAS Annual Meeting**  
Walt Disney World Swan and  
Dolphin Hotel  
Lake Buena Vista, FL, USA

**March 11-13, 2013**  
**Ratemaking & Product  
Management (RPM) Seminar**  
Hyatt Regency Huntington Beach  
Resort & Spa  
Huntington Beach, CA, USA

**May 19-22, 2013**  
**CAS Spring Meeting**  
The Westin Bayshore Vancouver  
Vancouver, BC, Canada

**June 6-7, 2013**  
**Seminar on Reinsurance**  
Fairmont Southampton  
Southampton, Bermuda

**September 16-17, 2013**  
**Casualty Loss Reserve Seminar**  
Boston Marriott Copley Place  
Boston, MA USA

## IN MEMORIAM

**Mary Anderson**  
(FCAS 1988) 1941-2012

**Kiran Rasaretnam**  
(FCAS 1998) 1967-2012

**David C. Riek**  
(ACAS 1999) 1967-2012

**Elsie Ruchlis**  
(FCAS 1938) 1913-2011

**Brian Michael Scott**  
(ACAS 2009) 1974-2012

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*The Actuarial Review* always welcomes letters and story ideas from our readers. Please specify which department you intend for your item—letters to the editor, news, puzzle solutions, etc.

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