

LIVING to 100

SOCIETY OF ACTUARIES
INTERNATIONAL SYMPOSIUM



Program

PRESENTED BY COMMITTEE ON KNOWLEDGE EXTENSION RESEARCH, COMMITTEE ON LIFE INSURANCE RESEARCH, INTERNATIONAL SECTION, LONG-TERM CARE SECTION, PENSION SECTION, PRODUCT DEVELOPMENT SECTION AND REINSURANCE SECTION

Jan. 5–7, 2011
Orlando, FL

Actuaries
Risk is Opportunity.®



Welcome
to Orlando!



Welcome to **Living to 100**, the fourth international research symposium bringing together thought leaders from many disciplines to share ideas and knowledge on aging, increases in survival rates and the resulting increase in aging populations, together with its implications to social, financial, health care and retirement systems. Actuaries, academics, gerontologists, demographers, economists, physicians, scientists and other professionals from around the world are attending this event to discuss the latest scientific information on how and why we age, measure current mortality and project future rates of improvement in survival, identify potential advantages and risks associated with the increasing number of retirees and suggest answers to difficult issues resulting from individuals living longer.

The 2011 symposium is a two-and-a-half day program that includes concurrent sessions to address a wide range of subjects. More than 30 papers will be presented on a variety of topics such as mortality projection methods and trends, long-term care, obesity and other factors that may affect mortality, to name a few. Formal discussions of the papers presented are scheduled along with ample opportunities for you to join in the dialogue. Distinguished speakers have also been assembled to provide panel discussions on annuity mortality, social insurance, retirement issues and the future supply of health care providers for the aging population. Difficult and perhaps controversial issues that society may face in addressing the increasing numbers of elderly are expected to be presented and/or discussed.

The information presented at **Living to 100** will aid participants in estimating advanced age mortality and mortality improvement rates in order to:

- Design, price, value and manage financial security products
- Develop national life tables
- Assess the state of social insurance programs and private pension plans
- Project the resources, products and services needed for, and used by, an aging population
- Provide valuable information to individuals and their advisors for retirement and financial planning.

We hope you enjoy your stay in Orlando and find the Symposium to be informative and thought provoking,

PROGRAM INFORMATION

Registration

The Living to 100 Symposium registration desk is open as follows:

DATE	TIME	LOCATION
Tuesday, Jan. 4	5:00 – 7:00 p.m.	Oceans Foyer
Wednesday, Jan. 5	7:00 a.m – 6:00 p.m.	Oceans Foyer
Thursday, Jan. 6	7:00 a.m. – 5:30 p.m.	Oceans Foyer
Friday, Jan. 7	7:00 a.m. – 1:00 p.m.	Oceans Foyer

Name badges are issued to all attendees. Please note that only those wearing badges will be admitted to meetings, meals, receptions and exhibits.

Hotel Information

Checkout time is 11:00 a.m. Those checking out before the conclusion of the meeting may check their bags at the bell desk of the hotel. Neither the SOA nor the hotel is responsible for lost or stolen items left unattended in public areas of the hotel. SOA staff is unable to accept any bags or other personal items at the registration desk.

Incoming faxes may be picked up at the business center.

Presentations/Handouts

Presentations/handouts are available on the Living to 100 Symposium website both before and after the meeting at <http://livingto100.soa.org/sym-overview.aspx> for attendees to print copies for themselves if they choose.

Evaluations

An overall evaluation form is now available via the Internet. The online form assists us in planning future meetings and allows you to comment on areas not addressed by the individual session evaluations. More details will be e-mailed to you following the meeting.

Attendee List and Complete Final Program

The complete final program with session descriptions, presenters lists and other meeting details, as well as the attendee list, are available at: <http://livingto100.soa.org/sym-overview.aspx>. There will also be one copy available at the registration desk for viewing.

Special Meal Requests

Special meal requests, such as a fruit plate, kosher or vegetarian, are available for luncheons only and must be requested in advance. If you require a special meal and did not request one in advance, please do so at the Society of Actuaries' registration desk before 8:00 a.m. on Wednesday. Although we cannot guarantee a special meal, we will do our best to provide one.

No Smoking Policy

For the comfort and health of all attendees, smoking is not permitted at any Society of Actuaries' function. This includes all meals, refreshment breaks and receptions.

Security Note

When leaving the meeting room for an extended period of time, please take valuables and personal belongings with you. Neither the SOA nor the hotel can be held responsible for lost or stolen items.



Continuing Education Credit

Enrolled Actuary Credit

Sessions designated “core” or “noncore” are recommended to help satisfy continuing education credits for enrolled actuaries. Instructions for obtaining credit will be provided at the meeting. While the SOA recommends these topics to help satisfy core and noncore continuing education credit for enrolled actuaries, the final decision as to meeting those requirements rests with the Joint Board for the Enrollment of Actuaries.

The following sessions were granted enrolled actuaries credit:

SESSION	CREDIT
3A: Comparison of U.S., U.K. and Canadian Annuity Mortality Tables and Studies	Noncore credit: 37.50 minutes Core credit: 37.50 minutes
General Session II: The New Retirement: Phased Retirement and Phases of Retirement—Adapting to Longer Lives and Different Support Systems	Noncore credit: 75 minutes
4A: Public Pension Reform	Noncore credit: 75 minutes
4B: Mortality Analysis and Trends	Noncore credit: 105 minutes
General Session VII: Social Insurance: Perspectives and Implications	Noncore credit: 75 minutes

SOA CPD Requirement

The SOA Continuing Professional Development (CPD) Requirement was effective on Jan. 1, 2009, and members must report compliance at the end of each CPD period. Members must meet the Basic Requirement provisions of Section B or one of the Alternative Compliance provisions of Section C of the SOA CPD Requirement in order to be deemed compliant.

The sessions at this event meet the basic SOA requirements provisions and may be suitable to meet the provisions of an Alternative Compliance standard (please consult the appropriate standard).

Below is the maximum number of credits you could receive, based upon your individual sessions:

- **19.75 credits** for the symposium can be applied toward the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion" and our "SOA Continuing Professional Development Requirement."

Ultimately, it is the member's responsibility to make a reasonable, good-faith determination as to whether a continuing education event meets the CPD Requirement.

For further information on these requirements, visit SOA.org.

U.S. Qualification Standards

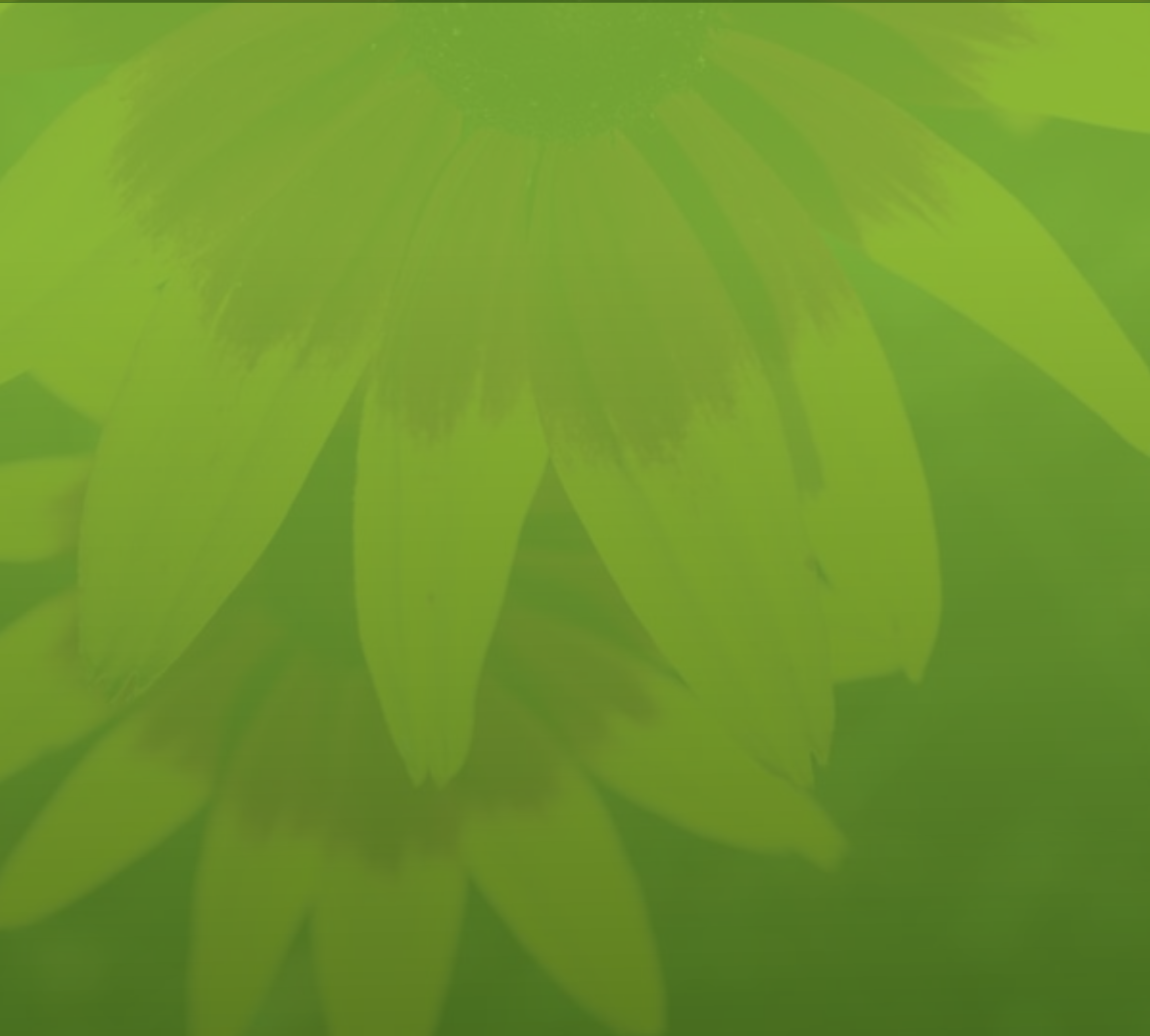
The Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States took effect Jan. 1, 2008 and were developed by the American Academy of Actuaries' Committee on Qualifications, on behalf of the five U.S. actuarial organizations.

The SOA believes that this symposium may be suitable for filling this requirement as continuing education under the U.S. Qualification Standards. Ultimately, it is an actuary's responsibility to make a reasonable, good-faith determination of what CE opportunities will enhance his or her ability to practice in a desired field.

For further information on this requirement, please visit the American Academy of Actuaries website, <http://actuary.org/qualstandards>.



Schedule of Events



SCHEDULE OF EVENTS

TUESDAY, JAN. 4		
5:00 – 7:00 p.m.	Registration	Oceans Foyer
WEDNESDAY, JAN. 5		
7:00 – 8:00 a.m.	Registration	Oceans Foyer
7:00 – 8:00 a.m.	Continental Breakfast	Oceans 5 & 7
8:00 – 9:45 a.m.	General Session I	Oceans 6 & 8
9:45 – 10:00 a.m.	Break	Oceans Foyer
10:00 – 11:45 a.m.	Concurrent Sessions 1	
	1A: Long-Term Care	Oceans 3 & 4
	1B: Mortality Compression	Oceans 6 & 8
11:45 a.m. – 12:45 p.m.	Keynote Luncheon	Oceans 5 & 7
1:00 – 2:45 p.m.	Concurrent Sessions 2	
	2A: Effects of Obesity and Other Controllable Factors on Survival	Oceans 6 & 8
	2B: Mortality Modeling I—Modified Lee-Carter Methods	Oceans 3 & 4
2:45 – 3:00 p.m.	Break	Oceans Foyer
3:00 – 4:15 p.m.	Concurrent Sessions 3	
	3A: Comparison of U.S., U.K. and Canadian Annuity Mortality Tables and Studies	Oceans 6 & 8
	3B: Mortality Modeling II—Other Methods	Oceans 3 & 4
4:15 – 4:30 p.m.	Break	Oceans Foyer
4:30 – 5:45 p.m.	General Session II	Oceans 6 & 8
5:45 – 6:00 p.m.	Daily Wrap-up	Oceans 6 & 8
6:00 – 7:00 p.m.	Reception	

SCHEDULE OF EVENTS

THURSDAY, JAN. 6		
7:00 – 8:00 a.m.	Registration	Oceans Foyer
7:00 – 8:00 a.m.	Continental Breakfast	Oceans 5 & 7
8:00 – 9:45 a.m.	General Session III	Oceans 6 & 8
9:45 – 10:00 a.m.	Break	Oceans Foyer
10:00 – 11:45 a.m.	General Session IV	Oceans 6 & 8
11:45 a.m. – 1:45 p.m.	Keynote Luncheon	Oceans 5 & 7
2:00 – 3:45 p.m.	Concurrent Sessions 4	
	4A: Public Pension Reform	Oceans 3 & 4
	4B: Mortality Analysis and Trends	Oceans 6 & 8
3:45 – 4:00 p.m.	Break	Oceans Foyer
4:00 – 5:15 p.m.	General Session V	Oceans 6 & 8
5:15 – 5:30 p.m.	Daily Wrap-up	Oceans 6 & 8
FRIDAY, JAN. 7		
7:30 – 8:30 a.m.	Registration	Oceans Foyer
7:30 – 8:30 a.m.	Continental Breakfast	Oceans 5 & 7
8:00 – 9:45 a.m.	Concurrent Sessions 5	
	5A: Implications	Oceans 3 & 4
	5B: Mortality Measurement	Oceans 6 & 8
9:45 – 10:00 a.m.	Break	Oceans Foyer
10:00 – 11:15 a.m.	General Session VI	Oceans 6 & 8
11:15 – 11:30 a.m.	Break	Oceans Foyer
11:30 a.m. – 12:45 p.m.	General Session VII	Oceans 6 & 8
12:45 – 1:00 p.m.	Symposium Wrap-up	Oceans 6 & 8
1:00 p.m.	Adjourn	



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Session Descriptions



SESSION DESCRIPTIONS

WEDNESDAY, JAN. 5

8:00 – 9:45 a.m.

General Session I

Symposium Co-Chairperson: Timothy F. Harris, FSA, MAAA

SOA President: Donald J. Segal, FSA, EA, FCA, MAAA

Recent Advances in Slowing Aging in Mammals and What this Means for Humans

Steven N. Austad

Professor, Department of Cellular & Structural Biology, the Department of Molecular Medicine and the Barshop Institute for Longevity & Aging University of Texas Health Science Center, San Antonio

In recent years, scientists have developed dozens of successful methods to enhance the health and extend the lives of research animals, including mammals such as ourselves. These methods include dietary methods, genetic methods and now even pharmacological methods. This talk will describe some of these results, focusing particularly on some genetic and pharmacological results, as well as the potential implications of these findings for the future of human health and longevity.

Austad's current research involves the search for ways to medically slow the rate of human aging. He's held faculty positions at the University of Idaho and Harvard University. His studies involve cellular and molecular investigations of bird and mammal species that are exceptionally long- or short-lived, as well as nutritional influences on aging. Austad is a multiple-award-winning researcher. He is a fellow of the Gerontological Society of America, vice president and research committee chair of the American Federation for Aging Research, and serves on the editorial board of most major scientific journals in the field. Austad has published more than 100 scientific papers and two books, with a third in progress. His popular trade book, *Why We Age*, has been translated into eight languages.

SESSION DESCRIPTIONS

WEDNESDAY, JAN. 5

10:00 – 11:45 a.m. – Concurrent Sessions 1

1A: Long-Term Care

MODERATOR	DISCUSSANT
Ronora E. Stryker, ASA, MAAA Society of Actuaries	John W. Paddon, M.A., FSA, MAAA Consulting Actuary

PAPERS	AUTHORS
<i>Is Long-Term Care Social Insurance Affordable in Developed Countries?</i>	Douglas W. Andrews, Ph.D., FSA, CFA, FCIA University of Southampton
<i>The Relationship between Cognitive Impairment and Mortality Rates among Long-Term Care Insurance Applicants</i>	Marc A. Cohen, Ph.D. (Presenter) Life Plans Inc. Xiaomei Shi, M.S. Life Plans Inc. Jessica Miller, M.S. Life Plans Inc.
<i>The CLASS Act and the Future of Long-Term Care Financing</i>	Stephen A. Moses Center for Long-Term Care Reform



SESSION DESCRIPTIONS

WEDNESDAY, JAN. 5

10:00 – 11:45 a.m. – Concurrent Sessions 1

1B: Mortality Compression

MODERATOR	DISCUSSANTS
<p>Thomas P. Edwalds, M.S., FSA, ACAS, MAAA Munich American Reassurance Company</p>	<p>Leonid A. Gavrilov, Ph.D. University of Chicago</p> <p>Natalia S. Gavrilova, Ph.D. University of Chicago</p>

PAPERS	AUTHORS
<p><i>Temporal Evolution of Some Mortality Indicators: Application to Spanish Data</i></p>	<p>Ana Debón, Ph.D., Universidad Politécnica de Valencia</p> <p>F. Martínez-Ruiz, Ayuntamiento de Valencia</p> <p>F. Montes, Universitat de Valencia</p> <p>Allen M. Klein, FSA, MAAA (Presenter) Milliman Inc.</p>
<p><i>Mortality Compression and Longevity Risk</i></p>	<p>Jack C. Yue, Ph.D., ASA National Chengchi University</p>
<p><i>Patterns of Old-Age Mortality, Emergence of the Centenarians and the Compression of Death above the Mode (Tribute to Roger Thatcher)</i></p>	<p>Jean-Marie Robine (Presenter) INSERM</p> <p>Siu Lan Cheung Hong Kong University of Science and Technology</p> <p>Shiro Horiuchi, Ph.D. City University of New York</p>

SESSION DESCRIPTIONS

WEDNESDAY, JAN. 5

11:45 a.m. – 12:45 p.m.

Keynote Luncheon

The Challenges, Opportunities and Implications of the Demographic Aging of Societies: Perspectives from the Oxford Institute of Ageing

Kenneth Howse, Senior Research Fellow, Oxford Institute of Ageing

Established in 2001, the Oxford Institute of Ageing (OIA) is the first research institute to examine societal ageing and demographic change, rather than the ageing of old people per se. Its aim is to understand how an ageing population affects work, family and social networks, political, economic and consumer behavior, the delivery of health and social services and how state support should be provided. OIA also works with colleagues in government and policymaking to help develop the economic, political and social structures that are needed in order to take advantage of the opportunities that a mature society will bring.

The demographic ageing of societies represents one of the major challenges for the 21st century. This demographic change provides not only challenges, but also opportunities to harness the experience, expertise and creativity of such a historically large number of older people. This talk will focus on some of OIA's activities and research on the major implications of the changing demography.

Howse is the editor of OIA's *Ageing Horizons* as well as director of OIA's James Martin Centre for Policy Challenges of Population Ageing, which oversees policy-related research. His interest in aging issues began in the late 1980s, when he was a research fellow with the Institute of Medical Ethics and worked on rationing problems in health care and the ethics of psychiatric research. This background in applied ethics is reflected in his strong interest in the ethical and normative dimension of the policy implications of demographic aging. He manages the health and longevity research theme and his current research focus is intergenerational equity and ethical issues surrounding aging. He is currently working on problems of generational fairness in pension reform and the policy issues that are likely to arise as a result of the increasing prevalence of extreme longevity.

SESSION DESCRIPTIONS

WEDNESDAY, JAN. 5

1:00 – 2:45 p.m. – Concurrent Sessions 2 2A: Effects of Obesity and Other Controllable Factors on Survival

MODERATOR	DISCUSSANT
Faye Albert, MBA, FSA, MAAA Albert Associates	S. Jay Olshansky, Ph.D. University of Illinois at Chicago

PAPERS	AUTHORS
<i>Obesity Causes and Effects</i>	Sam Gutterman, M.S., FSA, CERA, FCA, FCAS, HONFIA, MAAA PricewaterhouseCoopers LLP
<i>The Impact of Obesity and Diabetes on LTC Disability and Mortality: Population Estimates from the National Long Term Care Survey</i>	Eric Stallard, ASA, FCA, MAAA Duke University
<i>The Role of Social and Health- Related Characteristics in Determining Survivorship among the U.S. Oldest Old</i>	Hiram Beltrán-Sánchez, Ph.D. (Presenter) University of Southern California Jennifer Ailshire, Ph.D. University of Southern California



SESSION DESCRIPTIONS

WEDNESDAY, JAN. 5

1:00 – 2:45 p.m. – Concurrent Sessions 2

2B: Mortality Modeling I—Modified Lee-Carter Methods

MODERATOR	DISCUSSANT
Steven C. Siegel, ASA, MAAA Society of Actuaries	W. Ward Kingkade, Ph.D. U.S. Bureau of the Census

PAPERS	AUTHORS
<i>Projection of Mortality Rates at Advanced Ages in Canada with a New Lee-Carter Type Model</i>	Louis G. Doray, Ph.D., ASA (Presenter) Université de Montréal Kim O. Tang Université de Montréal
<i>Assessing and Extending the Lee-Carter Model for Long-Term Mortality Prediction</i>	Xiaoming Liu, Ph.D. (Presenter) University of Western Ontario Hao Yu, Ph.D. University of Western Ontario
<i>Coherent Mortality Modeling of Period and Cohort Effects for a Group of Populations</i>	Sharon S. Yang, Ph.D. (Presenter) National Central University Jack C. Yue, Ph.D., ASA National Chengchi University Yu-Yun Yeh Cathay Life Insurance Company

SESSION DESCRIPTIONS

WEDNESDAY, JAN. 5

3:00 – 4:15 p.m. – Concurrent Sessions 3

3A: Comparison of U.S., U.K. and Canadian Annuity Mortality Tables and Studies

MODERATOR	PANELISTS
Allen M. Klein, FSA, MAAA Consulting Actuary Milliman Inc.	Douglas C. Doll, FSA, MAAA Consulting Actuary Towers Watson Nick Dumbreck, FSA, CERA, FIA, FSAI Practice Leader/Consulting Actuary Milliman, Inc. Bob Howard, M.A., FSA, CERA, FIA, FSAI Assistant Vice President Financial Management Actuarial Sun Life Financial

This session will compare annuity mortality studies performed in the United States, Canada and the United Kingdom. Recent studies have focused on higher age results, as life expectancy at these ages has become more important. The committees developing new annuity mortality tables have devoted considerable attention to the impact of future mortality improvements. Tables and studies to be discussed include:

- United States—2010 development of a new payout annuity valuation table based on a recent experience study
- Society of Actuaries' Study of Mortality Improvement in Various Countries—An Update
- Tables or studies from the United Kingdom and Canada.

SESSION DESCRIPTIONS

WEDNESDAY, JAN. 5

3:00 – 4:15 p.m. – Concurrent Sessions 3

3B: Mortality Modeling II—Other Methods

MODERATOR	DISCUSSANT
W. Ward Kingkade, Ph.D. U.S. Bureau of the Census	Thomas P. Edwalds, M.S., FSA, ACAS, MAAA Munich American Reassurance Company

PAPERS	AUTHORS
<i>Longevity Risk and Regular Discount Sequence</i>	Hsin Chung Wang, Ph.D. (Presenter) Aletheia University Jack C. Yue, Ph.D., ASA National Chengchi University
<i>Simultaneous Prediction Intervals: An Application to Forecasting U.S. and Canadian Mortality</i>	Siu-Hang Li, Ph.D., FSA University of Waterloo Wai-Sum Chan, Ph.D., FSA, CERA, FRSS, C.Stat. (Presenter) Chinese University of Hong Kong

Learn more about the Society of Actuaries' living to 100 initiative:

Visit <http://livingto100.soa.org>.



SESSION DESCRIPTIONS

WEDNESDAY, JAN. 5

4:30 – 5:45 p.m.

General Session II – The New Retirement: Phased Retirement and Phases of Retirement—Adapting to Longer Lives and Different Support Systems

MODERATOR	PANELISTS
Robert Powell <i>Retirement Weekly</i> Editor Market Watch	Anna M. Rappaport, FSA, MAAA Anna Rappaport Consulting Paul D. Laporte, M.S., ASA, CCP, FLMI Consultant LIMRA International Andrew J. Peterson, FSA, EA, FCA, MAAA Staff Fellow—Retirement Systems Society of Actuaries Donald J. Segal, FSA, EA, FCA, MAAA Vice President Aon Hewitt

Traditional perceptions and expectations of retirement are changing. Given increased life expectancies, health care and long-term care needs and rising costs, as well as other factors, no longer can it be assumed that individuals' traditional eligibility ages for pension plans and social insurance programs make sense for society. Nor can it be assumed that individuals who retire from one occupation will totally exit the labor force. Trends in recent years show more individuals delaying retirement or supplementing retirement income by extending their working years through full-time or part-time employment. This panel will focus on how

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WEDNESDAY, JAN. 5

retirement is changing as we are living longer. Some of the key topics to be addressed include:

- Whether greater longevity is an opportunity, problem or both
- The evolving process of retirement
- Challenges of trying to work in retirement
- The importance of timing of retirement
- What age is it practical to work to and age variability by country
- Postretirement risks and how they will evolve
- Public knowledge about postretirement risks and gaps in that knowledge
- What changes during retirement
- Implications of trends in employee benefits and employment
- Preparing for a productive later phase in life
- Special issues for women.

From this session, you will gain a greater understanding of the implications of changing longevity for retirement; how retirement is evolving; future retiree needs; and how the issues are related across different stakeholders. You should be able to use this information to further define research and develop strategies, products and services to support the challenges, needs and opportunities arising from the growing retiree population.

SESSION DESCRIPTIONS

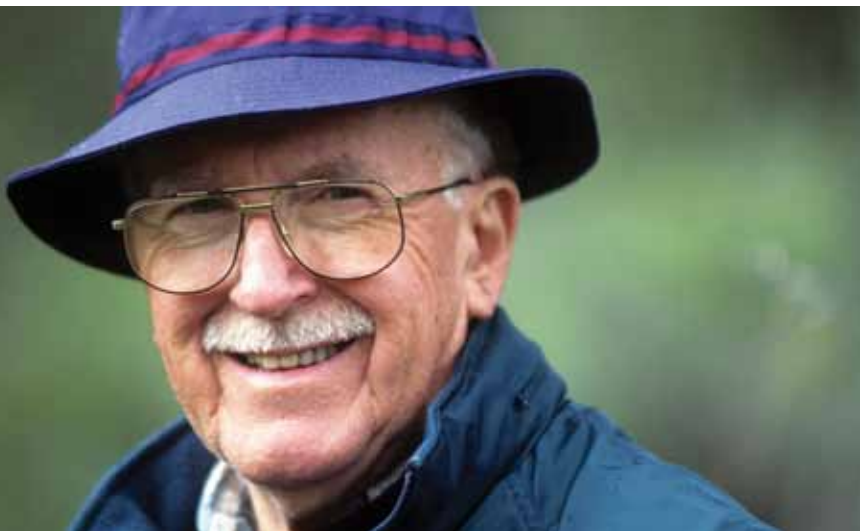
THURSDAY, JAN. 6

8:00 – 9:45 a.m.

General Session III – Slowing the Aging Process

MODERATOR	DISCUSSANT
Faye Albert, MBA, FSA, MAAA Albert Associates	Jean-Marc Fix, FSA, MAAA Optimum Re Insurance Co.

PAPERS	AUTHORS
<i>Comparing Determinants of Health Status Change across the Life Course</i>	Robert L. Brown, Ph.D., FSA, ACAS, FCIA, HONFIA University of Waterloo Andrew MacKenzie Statistics Canada Steven G. Prus, Ph.D. (Presenter) Carleton University
<i>The Likelihood and Consequences of Living to 100</i>	Leonard Hayflick, Ph.D. University of California, San Francisco
<i>Aging and Health Disparities in America in the 21st Century</i>	S. Jay Olshansky, Ph.D. University of Illinois at Chicago



SESSION DESCRIPTIONS

THURSDAY, JAN. 6

10:00 – 11:45 a.m.

General Session IV – Predictors of Exceptional Longevity

MODERATOR	DISCUSSANT
John W. Paddon, M.A., FSA, MAAA Consulting Actuary	Leonard Hayflick, Ph.D. University of California, San Francisco

PAPERS	AUTHORS
<i>Survival Advantage of Siblings and Spouses of Centenarians in 20th Century Quebec</i>	Robert Bourbeau, Ph.D. Université de Montréal Valerie Jarry (Presenter) Université de Montréal Alain Gagnon, Ph.D. University of Western Ontario
<i>Early-Life Predictors of Exceptional Longevity in the United States: Why Centenarians are Different from Their Shorter-Lived Siblings</i>	Leonid A. Gavrilov, Ph.D. (Presenter) University of Chicago Natalia S. Gavrilova, Ph.D. University of Chicago
<i>Increasing Genetic Contribution to Exceptional Longevity with Increasing Age</i>	Tom Perls, M.D., MPH, FACP (Presenter) Boston University Paola Sebastiani, Ph.D. Boston University

SESSION DESCRIPTIONS

THURSDAY, JAN. 6

11:45 a.m. – 1:45 p.m.

Keynote Luncheon – Living to 100 and Liking It— Research of Relevance from the National Institute on Aging

Marie A. Bernard, M.D., Deputy Director, National Institute on Aging

The National Institute on Aging (NIA) of the National Institutes of Health is the lead federal agency in aging research. Since its establishment in 1974, it has funded and conducted research that has led to discoveries that have enhanced the quality of life and health of older adults. New research from NIA shows exciting possibilities for life extension, with accompanying health benefits. This talk will focus on these new findings, emerging research that may contribute further to life and health extension, and its implications for the aging population.

Working closely with the NIA director, Bernard oversees more than \$1 billion in aging research conducted and supported annually by the NIA, including research on Alzheimer's and other neurodegenerative diseases, the biologic underpinnings of longevity and health span, frailty and function in late life and the social, behavioral and demographic aspects of aging. As NIA's senior geriatrician, she is particularly interested in the translation of NIA research from the very basic laboratory to the bedside and community and in the pipeline of future scientists examining questions of relevance to the aging population.

She currently serves on the following trans-NIH committees: Comparative Effectiveness Research (CER) Portfolio Workgroup, Bioethics Task Force and CMS-NIH Interagency Coordinating Committee. Bernard also serves as NIA's liaison to: Older Adult Work Group, Healthy People 2020; American Federation for Aging Research; American Geriatrics Society Research Committee; Geriatrics and Gerontology Advisory Council; and Department of Veterans Affairs.

SESSION DESCRIPTIONS

THURSDAY, JAN. 6

2:00 – 3:45 p.m. – Concurrent Sessions 4 4A: Public Pension Reform

MODERATOR	DISCUSSANTS
Steven C. Siegel, ASA, MAAA Society of Actuaries	J. Bruce MacDonald, FSA, FCA, FCIA, MAAA Consulting Actuary Andrew J. Peterson, FSA, EA, FCA, MAAA Society of Actuaries

PAPERS	AUTHORS
<i>How to Survive Living to 100: Ways to Improve the U.S. Retirement System</i>	Beverly J. Orth, J.D., FSA Mercer
<i>The Impact of the Automatic Balancing Mechanism for the Public Pension in Japan on the Extreme Elderly</i>	Yosuke Fujisawa, M.S. University of Waterloo
<i>Pension Reform in Canada—An Actuarial Perspective</i>	Robert L. Brown, Ph.D., FSA, ACAS, FCIA, HONFIA University of Waterloo



SESSION DESCRIPTIONS

THURSDAY, JAN. 6

2:00 – 3:45 p.m. – Concurrent Sessions 4 4B: Mortality Analysis and Trends

MODERATOR	DISCUSSANT
Faye Albert, MBA, FSA, MAAA Albert Associates	Eric Stallard, ASA, FCA, MAAA Duke University

PAPERS	AUTHORS
<i>Mortality Improvement in the United States: Analysis, Projections and Extreme Scenarios</i>	Joseph Lu (Presenter) Legal & General Assurance Society Limited Wun Wong Legal & General Assurance Society Limited
<i>Recent Adult Mortality Trends in Canada, the United States and Other Low Mortality Countries</i>	Nadine Ouellette, M.S. (Presenter) Université de Montréal Robert Bourbeau, Ph.D. Université de Montréal
<i>Mortality Experience of Three Senior Populations</i>	Vincent J. Granieri, MBA, FSA, EA, MAAA 21st Services, LLC



SESSION DESCRIPTIONS

THURSDAY, JAN. 6

4:00 – 5:15 p.m.

General Session V – Factors Affecting Mortality

MODERATOR	DISCUSSANT
Jean-Marc Fix, FSA, MAAA Optimum Re Insurance Co.	Elizabeth Arias, Ph.D. National Center for Health Statistics

PAPERS	AUTHORS
<i>Is Raising the Age of Eligibility Fair to All? An Investigation of Socioeconomic Differences in Mortality Using Population Data</i>	Geoff Rashbrooke, FIA Victoria University of Wellington
<i>Patterns of Aging-Related Changes on the Way to 100: An Approach to Studying Aging, Mortality and Longevity from Longitudinal Data</i>	Anatoli I. Yashin, Ph.D. (Presenter) Duke University Svetlana V. Ukraintseva, Ph.D. Duke University Konstantin G. Arbeev, Ph.D. Duke University Igor Akushevich, Ph.D. Duke University Alexander Kulminski, Ph.D. Duke University

SESSION DESCRIPTIONS

FRIDAY, JAN. 7

8:00 – 9:45 a.m. – Concurrent Sessions 5

5A: Implications

MODERATOR	DISCUSSANT
J. Bruce MacDonald, FSA, FCA, FCIA, MAAA Consulting Actuary	Beverly J. Orth, J.D., FSA Mercer

PAPERS	AUTHORS
<i>A Study on Emerging Health Conditions among the Aged in India and the Sufficiency of Medical Framework and Health Insurance</i>	N. V. Subramanyan, MBA, ICWAI, CAIIB (Presenter) HSBC Global Technology Centre
<i>Living to 100—Challenges and Opportunities for Employers</i>	Mary Nell Billings Hilton Worldwide Anna M. Rappaport, FSA, MAAA (Presenter) Anna Rappaport Consulting
<i>Risk Management Issues for Individuals with Special Emphasis for Women</i>	Anna M. Rappaport, FSA, MAAA Anna Rappaport Consulting



SESSION DESCRIPTIONS

FRIDAY, JAN. 7

8:00 – 9:45 a.m. – Concurrent Sessions 5 5B: Mortality Measurement

MODERATOR	DISCUSSANT
Ronora E. Stryker, ASA, MAAA Society of Actuaries	Henk van Broekhoven ING Group, Corporate Insurance Risk Management

PAPERS	AUTHORS
<i>Mortality Measurement and Modeling Beyond Age 100</i>	Natalia S. Gavrilova, Ph.D. (Presenter) University of Chicago Leonid A. Gavrilov, Ph.D. University of Chicago
<i>Mortality Rates at Oldest Ages</i>	Bob Howard, FSA, FCIA Sun Life Financial
<i>Making the Most of Experience Data—An Augmented Beta-Binomial Approach</i>	Paul J. Sweeting University of Kent



SESSION DESCRIPTIONS

FRIDAY, JAN. 7

10:00 – 11:15 a.m.

General Session VI – Will There Be Enough Doctors, Nurses and Hospitals for our Aging Populations?

MODERATOR	PANELISTS
Timothy F. Harris, FSA, MAAA Principal Milliman, Inc.	Douglas W. Andrews, Ph.D., FSA, CFA, FCIA Senior Lecturer University of Southampton William A. Peck, M.D., Director Center for Health Policy Washington University Noreen Siba Managing Director International Longevity Centre-UK

The session will present the increasing health care needs of the populations of developed countries as the populations age. These increasing health care needs will have to be met by increasing numbers of health care providers. How will this be accomplished in the developed countries of the world? The panelists will discuss the specific situation in their countries and may comment on their observations about other countries and the world in general. The training of medical professionals takes many years, and the information presented in this session can help the governments of developed countries in planning for the future by increasing medical and nursing schools and by modifying laws and regulations to allow the use of lesser medical practitioners for certain services.

By attending this session, you will gain a better understanding of the increasing demand for health care services that will be experienced in developed countries and the needed changes on the supply side to meet those increased demands.

SESSION DESCRIPTIONS

FRIDAY, JAN. 7

11:30 a.m. – 12:45 p.m.

General Session VII – Social Insurance: Perspectives and Implications

MODERATOR	PANELISTS
Sam Gutterman, FSA, CERA, FCA, FCAS, HONFIA, MAAA Director and Consulting Actuary PricewaterhouseCoopers LLP	Chresten Dengsoe Chief Actuarial Officer ATP, the Danish Labor Market Supplementary Pension Stephen C. Goss, ASA, EA, MAAA Chief Actuary U.S. Social Security Administration Jean-Claude Menard, MBA, M.S., FSA, FCIA Chief Actuary Office of the Superintendent of Financial Institutions Canada

Panelists will present three papers describing the methods used and resulting mortality projections prepared in the context of the social insurance programs of Canada [the Canada Pension Plan (CPP)], Denmark and the United States. The methods of analyzing and projecting future mortality as they affect social insurance programs and their resulting projections can provide actuaries with tools and bases for projecting future mortality rates for private insurance, annuities and pensions.

Participating Organizations

The following organizations have agreed to participate in this research endeavor with the SOA.

Actuarial Society of Hong Kong
Actuarial Society of South Africa
Actuarieel Genootschap of The Netherlands
Alliance for Aging Research
American Academy of Actuaries
American Academy of Insurance Medicine
American Geriatrics Society
American Society of Health Economists
American Statistical Association
ASPPA College of Pension Actuaries
Association of Home Office Underwriters (AHOU)
Association Suisse des Actuaire
Canadian Institute of Actuaries
Colegio Nacional de Actuarios (CONAC)–Mexico
Conference of Consulting Actuaries
Den Danske Aktuarforening (Denmark)
Eesti Akuaaride Liit – Estonian Actuarial Society
Employee Benefit Research Institute
The Gerontological Society of America
Government Actuary's Department, United Kingdom
Institute of Actuaries of Australia

Institute of Actuaries of India
Institute of Actuaries of Japan
International Actuarial Association
International Foundation for Retirement Education (InFRE)
International Foundation of Employee Benefit Plans
International Longevity Centre–UK
LIMRA
LOMA
National Academy of Social Insurance (NASI)
National Academy on an Aging Society
National Council on Aging
New Zealand Society of Actuaries
Office of the Chief Actuary, Canada (within the Office of the Superintendent of Financial Institutions)
Oxford Institute of Ageing
Quebec Pension Plan
Singapore Actuarial Society
Social Security Administration
The Actuarial Profession (Faculty and Institute of Actuaries)
The Japanese Society of Certified Pension Actuaries
The Pension Research Council and Boettner Center for Pensions and Retirement Research of the Wharton School



The Society of Actuaries Committee on Living to 100 Research Symposia

Robert J. Johansen, FSA, MAAA

Co-chairperson
Consulting Actuary
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President
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Mortality Statistics Branch
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Sam Gutterman, FSA, FCA, FCAS,

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Gene Held, FSA, MAAA

Vice President, Pricing
SCOR Life US Re Insurance Company

W. Ward Kingkade, Ph.D.

Statistician/Demographer
U.S. Bureau of the Census

Joseph Lu, FIA

Mortality Risk Actuary
Legal & General
Protection & Annuities
Legal & General Group

J. Bruce MacDonald, FSA, FCA, FCIA,
MAAA

Consulting Actuary

John W. Paddon, FSA, MAAA

Consulting Actuary

Anna M. Rappaport, FSA, MAAA

Anna Rappaport Consulting

Henk van Broekhoven

ING Group
Corporate Insurance Risk Management

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