



2019 **ANNUAL
MEETING**
& EXHIBIT

October 27-30
Toronto, Canada

Session 074: Predictive Analytics & Futurism and Retirement Section Joint Breakfast

[SOA Antitrust Compliance Guidelines](#)

[SOA Presentation Disclaimer](#)

Predictive Analytics and Futurism / Retirement Section Breakfast

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October 29, 2019



SOCIETY OF ACTUARIES

Antitrust Compliance Guidelines

Active participation in the Society of Actuaries is an important aspect of membership. While the positive contributions of professional societies and associations are well-recognized and encouraged, association activities are vulnerable to close antitrust scrutiny. By their very nature, associations bring together industry competitors and other market participants.

The United States antitrust laws aim to protect consumers by preserving the free economy and prohibiting anti-competitive business practices; they promote competition. There are both state and federal antitrust laws, although state antitrust laws closely follow federal law. The Sherman Act, is the primary U.S. antitrust law pertaining to association activities. The Sherman Act prohibits every contract, combination or conspiracy that places an unreasonable restraint on trade. There are, however, some activities that are illegal under all circumstances, such as price fixing, market allocation and collusive bidding.

There is no safe harbor under the antitrust law for professional association activities. Therefore, association meeting participants should refrain from discussing any activity that could potentially be construed as having an anti-competitive effect. Discussions relating to product or service pricing, market allocations, membership restrictions, product standardization or other conditions on trade could arguably be perceived as a restraint on trade and may expose the SOA and its members to antitrust enforcement procedures.

While participating in all SOA in person meetings, webinars, teleconferences or side discussions, you should avoid discussing competitively sensitive information with competitors and follow these guidelines:

- **Do not** discuss prices for services or products or anything else that might affect prices
- **Do not** discuss what you or other entities plan to do in a particular geographic or product markets or with particular customers.
- **Do not** speak on behalf of the SOA or any of its committees unless specifically authorized to do so.
- **Do** leave a meeting where any anticompetitive pricing or market allocation discussion occurs.
- **Do** alert SOA staff and/or legal counsel to any concerning discussions
- **Do** consult with legal counsel before raising any matter or making a statement that may involve competitively sensitive information.

Adherence to these guidelines involves not only avoidance of antitrust violations, but avoidance of behavior which might be so construed. These guidelines only provide an overview of prohibited activities. SOA legal counsel reviews meeting agenda and materials as deemed appropriate and any discussion that departs from the formal agenda should be scrutinized carefully. Antitrust compliance is everyone's responsibility; however, please seek legal counsel if you have any questions or concerns.

Presentation Disclaimer

Presentations are intended for educational purposes only and do not replace independent professional judgment. Statements of fact and opinions expressed are those of the participants individually and, unless expressly stated to the contrary, are not the opinion or position of the Society of Actuaries, its cosponsors or its committees. The Society of Actuaries does not endorse or approve, and assumes no responsibility for, the content, accuracy or completeness of the information presented. Attendees should note that the sessions are audio-recorded and may be published in various media, including print, audio and video formats without further notice.



Session Presented By:

Predictive Analytics and Futurism Section

Provides opportunities for actuaries to deepen their understanding of predictive analytics and emerging technologies relevant to the future of the actuarial profession and insurance industry.

Section Developed Content & Benefits



Predictive Analytics and Futurism Newsletter

Discusses futurism and the latest predictive analytics trends. Published three times a year. Digital editions now available.



SOA Meetings and Seminars

Section developed content presented during meeting sessions and seminars.



Podcasts

Expert led technical podcasts exploring the latest predictive analytics concepts and techniques.



Webcasts

Discounts on section developed webcasts. Free access to section created webcasts over one-year old.

Join the PAF Section Today! [SOA.org/PAF](https://www.soa.org/PAF)



CONNECT WITH SECTION MEMBERS



Session Presented By:

Retirement Section

Facilitating continuing education and practice development for actuaries specializing in retirement income programs and related areas.
Providing opportunities for Retirement Section members to present and exchange ideas.

Section Developed Content & Benefits



Retirement Forum and Retirement Section News

Publish papers and articles on topics of interest to members. Newsletter published three times a year, now in digital form.



SOA Meetings and Webcasts

Section developed content presented during meeting sessions and webcasts. Member discounts on webcasts and free access to webcasts over one-year old.



Research

Section led projects that are related to the issues practicing retirement actuaries face with clients. Support to projects that evaluate post-retirement needs & risks.



Special Initiatives

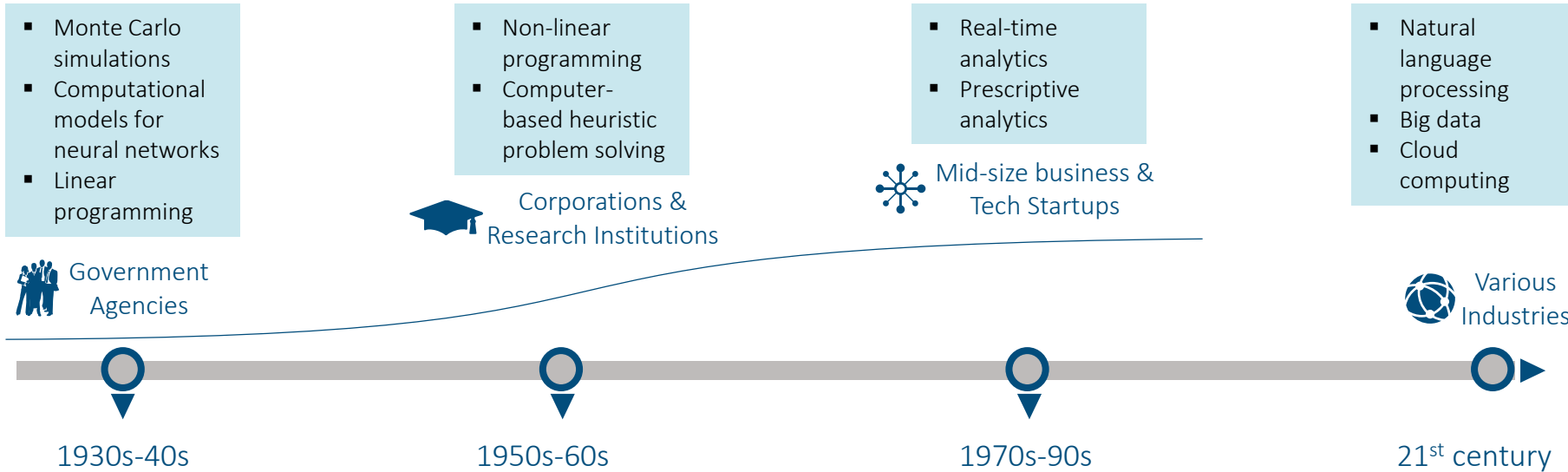
Current initiative focused on enhancing career opportunities for actuaries working with DC plans. Support and enhance actuaries skills and promote value provided by actuaries.

Join the Retirement Section Today! [SOA.org/Retirement](https://www.soa.org/Retirement)

Agenda

- Background on Today
- About our Speakers
- Polling questions
- Panel Discussion
- Q & A

History of Predictive / Enhanced Analytics



1940s: decode German message in WWII

1940: Kerrison Predictor automates targeting of anti-aircraft weapons against enemy planes

1944: Manhattan project uses computer simulations to predict nuclear chain reactions

1950: ENIAC'S first model for weather forecast

1956: Analytics solves "shortest path problem", improving air travel and logistics

1958: FICO application to credit risk decisions

1966: SAS Institute starts as research project

1973s: Black-Scholes model created to predict optimal price for stock options

1992: FICO deploys real-time analytics to fight credit fraud

1995: Amazon and eBay go live, race to personalize online experiences starts

1998: Moneyball changes pro sports as Oakland A's use analytics for a competitive age

- **Aerospace:** Predict the impact of specific maintenance operations on aircraft reliability, fuel use, availability and uptime.
- **Automotive:** Incorporate records of component sturdiness and failure into upcoming vehicle manufacturing plans. Study driver behavior to develop better driver assistance technologies and, eventually, autonomous vehicles.
- **Energy:** Forecast long-term price and demand ratios. Determine the impact of weather events, equipment failure, regulations and other variables on service costs.
- **Financial services:** Develop credit risk models. Forecast financial market trends. Predict the impact of new policies, laws and regulations on businesses and markets.
- **Manufacturing:** Predict the location and rate of machine failures. Optimize raw material deliveries based on projected future demands.
- **Law enforcement:** Use crime trend data to define neighborhoods that may need additional protection at certain times of the year.
- **Retail:** Follow an online customer in real-time to determine whether providing additional product information or incentives will increase the likelihood of a completed transaction.

Predictive Analytics in Insurance and Retirement





Insurance

- **Underwriting** – cost-effective and efficient
- **Marketing** – identify potential customers and targeted sales effort
- **In-Force Management** – provide more insight to emerging mortality experience, inform changes to nonguaranteed policy features
- **Fraud and Risk Management** –
 - Behavioral intelligence and analytics to predict new customer risk and fraud
 - Uncovering agent fraud and policy manipulation
- Pricing and product optimization
- Streamlining online experiences for increased Conversions
- Operational automation for increased efficiency
- Claims prediction and timely resolution
- Optimizing user experience through dynamic engagement

Retirement

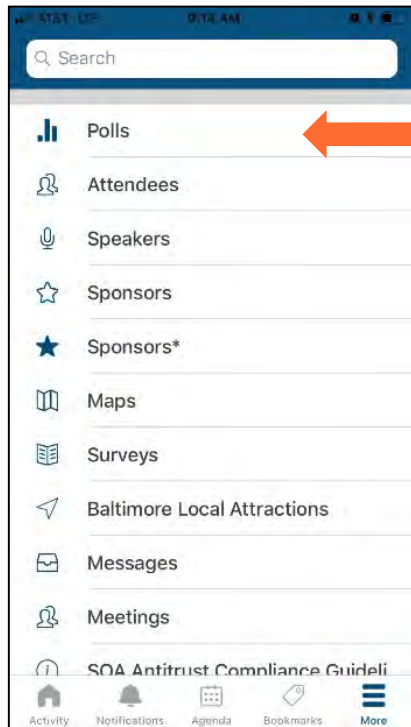
- Predict participant loans from defined contribution plans
- Identify patterns in participant contributions, repayment and default
- Estimate retirement expenses based on participant lifestyle

About our Speakers

| Moderator / Presenters | Background |
|---|---|
|  <p>Nate Pohle FSA, CERA, MAAA</p> <p>Manager Deloitte Consulting npohle@deloitte.com</p> | <ul style="list-style-type: none"> ■ Nate is a Manager with experience in the Life insurance, annuity, and sports industries. ■ At Deloitte, Nate has focused on the strategy and operations of insurance and annuity writers. ■ Nate has experience helping these insurance companies modernize their organizations to meet changing customer expectations and internal stakeholder needs. This includes reimagining their end-to-end processes and employing best in class marketing, underwriting, pricing, and valuation. ■ Nate helps companies leverage advanced analytics, robotics, and cognitive technologies. |
|  <p>Michael Niemerg FSA, MAAA</p> <p>Manager Milliman Michael.Niemerg@milliman.com</p> | <ul style="list-style-type: none"> ■ Michael Niemerg is the predictive modeling manager with the IntelliScript practice of Milliman, Inc. ■ His primary focus is creating predictive and maintaining models using non-traditional data sources with a focus on pricing/underwriting and inforce analysis for life and health insurance clients. ■ Previously, he has worked in pricing and reserving for group insurance. |
|  <p>Bri Bloxsom</p> <p>Senior Consultant Deloitte Consulting bbloxsom@deloitte.com</p> | <ul style="list-style-type: none"> ■ Bri Bloxsom is a Human Capital Senior Consultant in Deloitte's Workforce Transformation practice. ■ She has a strong foundation in pension actuarial work supplemented by consulting experience across industries, including public sector and non-profit organizations. She has assisted her clients with data analytics and automation, risk management, process improvement, organizational design, strategic workshop facilitation, and benchmarking activities. ■ Bri co-leads Deloitte's Exponential Actuary Data Wrangling initiative and is skilled in several automation and visualization tools, most recently developing an automation and analytics platform for HR data. |
|  <p>John A. Turner</p> <p>Director Pension Policy Center jaturner49@aol.com</p> | <ul style="list-style-type: none"> ■ John A. Turner is Director of the Pension Policy Center. He has published 14 books and more than 100 articles. ■ He received an award for best article of the year in the Journal of Risk and Insurance, a best paper award from the Pension, Benefits and Social Security section of the International Actuarial Association for a coauthored paper on War and Pensions, the Department of Labor Special Act Award for work preparing the Secretary of Labor's Labor Day Report, the inaugural Simplification Award from the American College of Employee Benefits Counsel for the best proposal for simplifying pension law. ■ Two of his books have been translated into Japanese and three have been required reading for examinations of the Society of Actuaries. He has a PhD in Economics from the University of Chicago. |

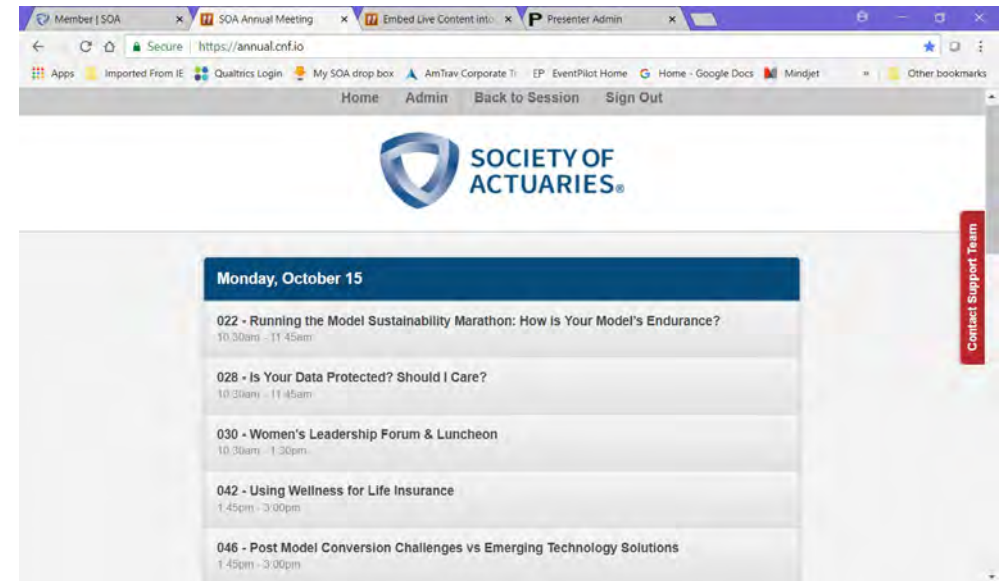
To Participate, look for Polls in the SOA Event App or visit annual.cnf.io in your browser

Find The Polls Feature (including Social Q&A) Under **More** In The Event App or Under This Session in the Agenda



or

Type annual.cnf.io In Your Browser
Go to session 074



Live Content Slide

When playing as a slideshow, this slide will display live content

**Poll: What is your experience with
predictive analytics?**

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Poll: What is your area of practice?

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When playing as a slideshow, this slide will display live content

Poll: Where have you seen predictive analytics applied to Pensions?

Live Content Slide

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Poll: Are your respective organizations:

Q & A

