Catastrophe risk continues to be a growing threat to the global economy. The nature and source of this risk is evolving as changing climate and manmade hazards add layers of complexity to the global risk landscape. As these threats develop, techniques and tools used to measure and manage catastrophic risk also evolve. This year’s RAA Catastrophe Risk Management conference will examine threats and risk management solutions through a forward-looking lens, presenting over-the-horizon ideas and solutions as we manage these increasingly complex risks.

Sessions include: Expert Geoscientist Panel; Climate Influences on Hurricane Risk; Cyber—Challenges for Underwriting and Risk Management: A View from the London Market; Changes Ahead for Catastrophe Peril Models; Do We Understand Japan Typhoon Tail Risk?; Attributes of the Best In Class Tropical Cyclone Model/Tools to Quantify Flood; Earthquake “Gray Swans”; Wind/Tropical Cyclone/Severe Convective Storms 101; The Influence of Uncertainty in the New Madrid Seismic Zone; Impacts of Earthquakes—It’s Not Just Building Damage—Ridgequest Earthquake; Extreme Tail Risk & Corresponding Uncertainty; Severe Convective Storm Model Sophistication; Interpretable Deep Learning for Analysis of Extreme Weather Risk; CEO Panel on the State of the Market; National Flood Insurance Update Risk Rating 2.0; U.S. Geological Survey Global Impact on EQ Modeling; Florida Commission Update; IBHS Research Update – Why the Building Envelope Matters; Wildfire Risk; Lloyds Issues, Lloyds Framework; Fire Weather Research; Drought/Extreme Heat/Wildfires; and much more

Cat Risk attendees will receive complimentary 2020 membership in the International Society of Catastrophe Managers (ISCM).

Who Should Attend
- Professionals – including insurers, reinsurers, and investment banks – who are responsible for risk management functions related to catastrophe risk
- Attorneys who specialize in (re)insurance
- Academics
- Federal/state government professionals
- Regulators/staff

Reinsurance Association of America
Reinsurance Education Institute

2020 CAT MODELING SPONSORS:
The 2020 Cat Risk agenda continues to develop -- see www.reinsurance.org for the latest agenda and expanded session descriptions.

MONDAY, FEBRUARY 24, 2020
3:00 p.m.  Cat Risk Management Registration
3:30 p.m. Pre-conference
4:45 p.m. Reception

TUESDAY, FEBRUARY 25, 2020
7:00 a.m. Breakfast / Cat Risk Management Registration
8:30 a.m. Welcome and Introduction
Frank Nutter, President, RAA
Carl Hedde, CGH Consulting, LLC
9:00 a.m. State of the Market Panel
Moderator: Frank Nutter, President, RAA
Panelists: V.J. Dowling, Managing Director, Dowling & Partners
John Welch, CEO, North America Reinsurance, AXA XL
Richie Whitt, CEO, Markel
Topics include:
• State of the Insurance Marketplace;
• Important Issues That are Driving Market Conditions;
• Market Perspectives - Insurer vs Reinsurer Perspectives;
• What’s on the Horizon;
10:30 a.m. Geoscientist Panel
Moderator: Mark Bove, Natural Catastrophe Solutions Manager, Munich Re
Panelists: Josh Darr, Head of North America Peril Advisory & Meteorologist, Guy Carpenter
Ioana Dima-West, Executive Director/Atmospheric Scientist/Head of Model Research and Evaluation, Willis Re
Kelly Hereid, AVP, Senior Research Scientist, Chubb
Geoscientists who work for insurers, reinsurers and brokers assist their organization (and their clients) to understand the impacts of natural catastrophes on their business. Extreme events continually provide new lessons and insights to help better understand these perils and finanical impacts. The panel will focus on tropical cyclones, including Hurricane Dorian in the Bahamas, the recent typhoons in Japan, and how climate change is affecting these powerful storms.

Noon Lunch
1:30 p.m. Climate Influences on Hurricane Risk, Today and Tomorrow
Suzana J. Camargo, Marie Tharp Lamont Research Professor, Lamont-Doherty Earth Observatory, Columbia University
Climate change alters the backdrop for every extreme event but measuring the climate’s impact on hurricane risk is complicated by high natural variability, the rarity of the most extreme events, and the difficulty in modeling complex weather systems. Hurricane risk has an outsized influence on the insurance industry, so it is crucial to understand how the hazard may change going forward. This discussion identifies detectable climate impacts on tropical cyclone risk in the current environment, and how those impacts might change in a warming world.

3:00 p.m. Breakout Sessions
Session I
Change Ahead (Repeate 2/27 at 8:15 a.m.)
Andrew Siffert, VP/Senior Meteorologist Catastrophe Analytics, BMS
Three things are certain in life: death, taxes and changing cat risk models. New claims data from new cat events provide enough motivation for model vendors to update existing catastrophe peril models. In some cases, regulation requires catastrophe peril models to be updated. This session will explore how to work with cat model changes and whether the tools help understand model change and adjustment.

Do We Understand Japan Typhoon Tail Risk? (Repeate 2/27 at 8:15 a.m.)
Dail Rowe, Senior Scientist and Regional Manager, Weather Predict
Viewing recent typhoons against the backdrop of history and climate change suggests that our industry may underestimate typhoon risk in Japan. In this session, we will apply lessons learned from recent typhoons onto some notable historical events and consider implications for risk modelers.

Session II
What are the Attributes of a Best in Class Tropical Cyclone Model/Tools to Quantify Flood? (Repeate 2/26 at 2:00 p.m.)
Jeff Gall, Hazard Research Head, Validus
The last major U.S. hurricane model enhancement came in the form of hydrodynamic storm surge modeling nearly a decade ago. This session highlights a number of data and/or scientific attributes which represent areas for future model improvement, including:
• Use of 10-meter USGS ground elevation for improved storm surge risk assessment;
• Inclusion of tropical storms in the event set and a larger number of stochastic events;
• Numerically-modeling U.S. hurricane intensity;
• Exposure data quality adjustments;
• Lessons learned on vulnerability from recent U.S. hurricane events;
• Explicit capture and handling of flood sub-limits.

(continued)
Session III
Earthquake Surprises 101 (Repeated 2/26 at 2:00 p.m.)
Kelly Hereid, Ph.D., AVP, Senior Research Scientist, Chubb
All well-modeled earthquakes are alike; each poorly-modeled earthquake is a surprise in its own way. This session for earthquake beginners will cover the surprising aspects of major historical earthquakes, and how those surprises have impacted earthquake catastrophe models today. A look at some earthquake “gray swans” will highlight where surprises might lurk in future events.

Wind/Tropical Cyclone/Severe Convective Storms 101
(Repeated 2/26 at 2:00 p.m.)
Steve Bowen, Director & Meteorologist, AON
The primary drivers of catastrophe payouts for reinsurers are from tropical cyclones and severe convective storms. This session will help new entrants to the industry gain a better understanding of the significance of each peril, and clearly recognize the different datasets and tools.

Session IV
The Influence of Uncertainty in the New Madrid Seismic Zone (Repeated 2/26 at 2:00 p.m.)
Dr. Susan Hough, Seismologist, U.S. Geological Survey
In July 2019, the Missouri Department of Insurance issued a report arguing that the New Madrid fault area is on the verge of an insurance market collapse. This reflects an industry grappling with considerable uncertainty in regional seismic risk. This session will address the new science in New Madrid seismic risk assessment, and where the questions lie.

Triumphs, Conundrums, and Debates in Global Earthquake Forecasting and Seismic Hazards
(Repeated 2/26 at 2:00 p.m.)
Ross Stein, CEO, Temblor
The principal weakness of fault-based global models is the non-uniform data. In 2018, the USGS built a model for South America, and in 2019 the GEM Foundation (Global Earthquake Model) published a mosaicked model for the world. In 2020, Temblor harnessed GEAR (Global Earthquake Activity Rate) to build a single, globally consistent model. This session will highlight the strengths and weaknesses, similarities and differences among these models and approaches.

Session V
National Climatic Data Center

Session VI
Reinsurance Cyber Modeling: The Path to Quantifying Cyber Exposure with Limited Data
Shalom Bublil, Chief Risk Officer, Kovrr
A significant part of global insured cyber risk is transferred to reinsurance carriers. The challenge for reinsurers in quantifying and pricing their aggregated cyber exposure stems from the limited data available about the portfolio composition and coverage offered within the treaties. Kovrr will discuss strategies to deliver accurate modeling for both affirmative and silent cyber exposure of the reinsurers portfolio.

4:00 p.m. Breakout Sessions

Session I
Impacts of Earthquakes: It’s Not Just Building Damage—Ridgecrest Earthquake
(Repeated 2/26 at 2:00 p.m.)
Christine Goulet, Ph.D., Executive Director for Applied Science, Southern California Earthquake Center, University of Southern California
Dr. Goulet will discuss the Ridgecrest EQ sequence and the key research efforts at SCEC that are applicable to our industry.

Session II
Extreme Tail Risk & Corresponding Uncertainty
(Repeated 2/27 at 8:15 a.m.)
Monica Mason, SVP, TransRe
Maryam Haji, AVP, TransRe
This session will explore how little changes in experience could dramatically impact the view of tail risk and appropriateness of cat models.
Session III
Cyber – Challenges for Underwriting and Risk Management: A View from the London Market (Repeated 2/27 at 8:15 a.m.)
David Singh, Head of Exposure & Portfolio Management, MS Amlin
Emma Watkins, Head of Exposure Management, Risk Aggregation, Lloyds
Exposure-based catastrophe models lend themselves well to cat perils with limited loss history. But what if the hazard, vulnerability and exposure are constantly changing as with the cyber peril? With the threat and conditions constantly evolving, the silent/affirmative/blended coverage question remains pertinent for multi-class, multi-jurisdiction (re)insurers and the implications of the assumptions and consequences of this peril can be highly material. This session describes the process and challenges associated with a scenario-based approach, and complexities associated with fulfilling internal and regulatory exposure management requirements for cyber as a peril.

Session IV
Severe Convective Storm Model Sophistication for Various Geographic Regions (Repeated 2/26 at 11:30 a.m.)
Dr. Dave Bachiochi, Senior Scientist and Regional Manager, WeatherPredict Consulting
This discussion presents current state of modeling the risk for key severe convective storm regions across the globe. Modeling has evolved to utilize more advanced methodologies as the amount and quality of data continue to improve and physical modeling continues to advance in speed and towards the scale of the peril.

Interpretable Deep Learning for Analysis of Extreme Weather Risk (Repeated 2/26 at 11:30 a.m.)
David John Gagne, Scientist, NCAR
Each hailstorm and hurricane presents a different kind of risk depending on its internal structure and location. Given a large dataset of storms, how can we quantify the risk posed by different types? Deep learning is a subset of machine learning that can transform spatio-temporal data into high-level representations more amenable to prediction. Deep learning models have produced improved estimates of hail size and hurricane intensity. By combining deep learning with visualization of the meaning of internal nodes, we have built automated detectors of different storm types and quantified their severities. This session will explain the methods and show the storm structures most associated with large hail and rapid intensification and where they have occurred.

Session V
National Flood Insurance Program Update Risk Rating 2.0 (Repeated 2/26 at 11:30 a.m.)
Andy Neal, Actuary, Federal Insurance and Mitigation Administration DHS/FEMA
Florida Commission Update (Repeated 2/26 at 11:30 a.m.)
Minchong Mao, FCAS, MAAA, CCRMP, Managing Director, Reinsurance Solutions, AON
Minchong Mao shares her different perspectives on Florida Modeling commission work and model regulations - as a user of the model, a Florida Modeling commission member, a reinsurance broker and a modeling vendor.

Session VI
Data Management Practices: Location MDM: Putting Location Data in Its Place
Mike Hofert, Managing Director of Insurance Solutions, Pitney Bowes
Understanding risk and pricing home & automobile insurance policies depends on a detailed understanding of the property being insured. An emerging sentiment is that the insurance industry needs a new all-encompassing approach to Master Data Management (MDM) at the location level - the method of defining and managing this critical data to create a single point of reference. Three key principles typically apply to Location MDM; hyper-accurate location data, going beyond basic postal address information and using geo-coordinates and other data for greater precision; a unique and consistent identifier for each property; and having the ability to link other data sources to the property identifier. This session will discuss how organizations, especially insurers, are optimizing location data for enterprise use through Location MDM

5:00 p.m. Reception

WEDNESDAY, FEBRUARY 26, 2020

7:00 a.m. Breakfast
8:30 a.m. ISCM Update
David G. Keeton, EVP, Avoca Risk Underwriting Services

8:45 a.m. Storms, Wildfire, and Climate: How Homes (and Insurers) Survive
Roy Wright, President, IBHS
A changing climate has led to more storms memorable for prolonged wind and torrential rains that erode a structure’s ability to resist damage over the duration of the event. Likewise, wildfires have grown into a larger, longer-lasting threat for communities, and one that challenges the principles of traditional home design and newer drought-resistant landscaping trends. Roy Wright, President and CEO of the Insurance Institute for Business & Home Safety, leads a team dedicated to helping insurers develop strategies to confront these challenges. He will share the latest research findings to mitigate against these growing threats.
10:15 a.m. Wildfire: The Present, The Future, and What Needs To Be Done?
John Phipps, Deputy Chief, U.S. Fire Service
The last few years have witnessed some large-scale wildfires that have produced unprecedented insured, economic, and societal losses. In this session, the USFS will provide their view on why the severity and frequency of wildfire is, or is perceived to be, increasing, their expectations for the future, and the drivers behind this crisis. Can this hazard be reduced, and if so, what needs to be done? What is the USFS doing to help and ways the insurance industry can work with the USFS—to include the sharing of data, models, and insurance backed resiliency bonds.

11:30 a.m. Breakout Sessions

Session I
Is It Better to be Good than Lucky - or Lucky than Good? Evaluating Cat Risk Management Approaches in the London Market
(Repeated 2/27 8:15 a.m.)
Kirsten Mitchell Wallace, Head of Risk Aggregation, Lloyds
In years with no catastrophes, every organisation can tout great cat underwriters and superb cat risk management capability. But how can you tell lucky from good? What features instill confidence in cat risk management? Should these soft factors be used to modify the risk? Lloyds asked these questions and worked closely with their market to define a best practice framework for cat risk to inform decision-making.

Session II
National Climatic Data Center

Session III
National Flood Insurance Program Update Risk Rating 2.0
Andy Neal, Actuary, Federal Insurance and Mitigation Administration DHS/FEMA

Florida Commission Update
Minchong Mao, FCAS, MAAA, CCRMP, Managing Director, Reinsurance Solutions, AON

Session IV
Severe Convective Storm Model Sophistication for Various Geographic Regions
Dr. Dave Bachiochi, Senior Scientist and Regional Manager, WeatherPredict Consulting
As other perils dominate the focus of the catastrophic reinsurance business, severe convective storm modeling continues to evolve. Industry demands are dictating change in modeling the risk. This discus-

12:15 p.m. Lunch

2:00 p.m. Breakout Sessions

Session I
Fire Weather Research (Repeated 2/27 8:15 a.m.)
Drought / Extreme Heat / Wildfires (Repeated 2/27 8:15 a.m.)
Kim Roberts, SVP, Guy Carpenter

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CAT RISK MANAGEMENT 2020 WORKING AGENDA

WEDNESDAY, FEBRUARY 26, 2020

2:00 p.m. Breakout Sessions continued

Session II
What are the Attributes of a Best in Class Tropical Cyclone Model/Tools to Quantify Flood?
Jeff Gall, Hazard Research Head, Validus

Session III
Earthquake Surprises 101
Kelly Hereid, Ph.D., AVP, Senior Research Scientist, Chubb

Wind/Tropical Cyclone/Severe Convective Storms 101
Steve Bowen, Director & Meteorologist, AON

Session IV
Impacts of Earthquakes: It’s Not Just Building Damage Ridgequest Earthquake
Christine Goulet, Ph.D., Executive Director for Applied Science, Southern California Earthquake Center, University of Southern California

Session V
The Influence of Uncertainty in the New Madrid Seismic Zone
Dr. Susan Hough, Seismologist, U.S. Geological Survey

Triumphs, Conundrums, and Debates in Global Earthquake Forecasting and Seismic Hazards
Ross Stein, CEO, Temblor

Session VI
Cape Analytics

3:15 p.m. Breakout Sessions
(see the online agenda for breakout session descriptions)
AIR, CoreLogic, Impact Forecasting, Karen Clark & Co., Katrisk, and RMS.

4:15 p.m. Breakout Sessions
(see the online agenda for breakout session descriptions)
AIR, CoreLogic, Impact Forecasting, Karen Clark & Co., Katrisk, and RMS.

5:00 p.m. Reception

9:00 p.m. ISCM Night Owl Reception

THURSDAY, FEBRUARY 27, 2020

7:00 a.m. Breakfast

8:15 a.m. Breakout Sessions

Session I
Change Ahead
Andrew Siffert, VP/Senior Meteorologist, Catastrophe Analytics, BMS

Do We Understand Japan Typhoon Tail Risk?
Dail Rowe, Senior Scientist and Regional Manager, Weather Predict

Session II
Fire Weather Research
Drought / Extreme Heat / Wildfires
Kim Roberts, SVP, Guy Carpenter

Session III
Extreme Tail Risk & Corresponding Uncertainty
Monica Mason, SVP, TransRe
Maryam Haji, AVP, TransRe

Session IV
Cyber – Challenges for Underwriting and Risk Management: A View from the London Market
David Singh, Head of Exposure & Portfolio Management, MS Amlin
Emma Watkins, Head of Exposure Management, Risk Aggregation, Lloyds

Session V
Is It Better to be Good than Lucky - or Lucky than Good? Evaluating Cat Risk Management Approaches in the London Market
Kirsten Mitchell Wallace, Head of Risk Aggregation, Lloyds

9:15 a.m. Crisis Management - Response to Large Events
Craig Fugate, former administrator of the Federal Emergency Management Agency

10:15 a.m. Networking/Hotel Check-out Break

11:00 a.m. Chief Innovation Officers Panel

The future of catastrophe risk modelling: straightforward and transparent customization, the use of new or emerging technology, necessary skill sets for both model developers and risk analysts, new or underutilized (at present) data sources.

Moderator: Hjörður Thrainsson, Senior Corporate Underwriter, Munich Re

Panelists:
Glen Daraskevich, SVP, Karen Clark & Co.
Dr. Jayanta Guin, EVP and Chief Research Officer, AIR Worldwide
Thomas Larsen, Principal, Industry Solutions, CoreLogic
Dr. Dag Lohmann, CEO & Co-Founder, KatRisk
Robert Muir-Wood, EVP & Chief Research Officer, RMS
Will Skinner, Managing Director, Aon Impact Forecasting

1:00 p.m. Wrap Up/Ajournment
REGISTRATION FORM

Cat Risk Management 2020
Forward Looking Catastrophe Risk Management
February 25-27, 2020, Orlando, FL

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Title ________________________________________________
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CE Credits: I would like to receive continuing education credits for: [ ] CPE [ ] CPD [ ] CLE in the state of ____________.

REGISTRATION

The registration fee includes program materials, breakfasts, networking breaks, lunches, and evening reception.

Payment is enclosed for:
_______ $1995 Early Registration prior to January 22, 2020
_______ $2095 General Registration
_______ $1895 RAA Members
_______ $1345 Government Entities
_______ $ 975 Insurance Regulators

Cancellation Policy: All seminar cancellations must be in writing to the RAA or fax 202-638-0936. Refund or credit will be issued up to two weeks prior to the start of the conference. After that date (Tuesday, February 11, 2020), no refunds or credits will be issued, but substitutes are welcome.

Program/Registration Inquiries: Contact Johnetta Riley at 202-783-8322 or e-mail riley@reinsurance.org

PAYMENT OPTIONS

Select one of the following options to register:

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Accommodations: The Loews Portofino Bay Hotel is offering attendees a discount rate of $279. The deadline for this rate is January 31, 2020, or when the room block has been filled. The hotel is located at 5601 Universal Blvd, Orlando, FL. Contact the hotel directly to make your room reservations at 1-866-360-7395 and mention the Reinsurance Association of America room block to get the discount rate.