#### 2020 Awards

#### ANS100 AMERICAN METEOROLOGICAL SOCIETY

**100<sup>TH</sup> ANNUAL MEETING | BOSTON | 2020** 

# AMS Fellow Ping Chang

Professor and Chair Texas A&M University, College Station, Texas

Ping Chang is a professor and the Louis & Elizabath Scherck chair in oceanography and serves as the director of the International Laboratory for High-Resolution Earth System Prediction at Texas A&M University. He received his Ph.D. from Princeton University in 1988. His research focuses on climate dynamics and modeling. He is a contributing author of the fifth Assessment Report of the Intergovernmental Panel on Climate Change and an author of ~140 peer-reviewed scientific journal papers.



#### AMS Fellow Donna J. Charlevoix

Director UNAVCO,

Dr. Donna Charlevoix is director of Education and Community Engagement for UNAVCO and the NSF-supported GAGE facility. She worked for over a decade in academia as faculty after which she transitioned to work for non-profits that support federally-funded science facilities. She is actively involved in atmospheric science education research, co-authors university science textbooks, and serves in the leadership of the American Meteorological Society. She resides with her family in Colorado.



UNAVCO, Boulder, Colorado

### AMS Fellow Jeffrey L. Collett, Jr.

Professor Colorado S

Dr. Collett is a professor and head of Colorado State University's Atmospheric Science Department. He studied at MIT (Chemical Engineering) and Caltech (Environmental Engineering Science), before completing a postdoc at ETH-Zurich. Principal research topics include emissions and air quality impacts from oil and gas development; the sources, transport and deposition of reactive nitrogen pollutants; air quality impacts of wild and prescribed fires; aerosol chemistry; and air pollution processing by clouds and fogs.



Colorado State University, Fort Collins, Colorado

#### AMS Fellow John Cortinas



Dr. John Cortinas is a member of the federal government's Senior Executive Service, serving as the director of NOAA/OAR's Atlantic Oceanographic and Meteorological Laboratory (AOML) in Miami, Florida. Prior to joining AOML, he was the director of NOAA/OAR's Office of Weather and Air Quality. He received a B.S. in Meteorology from Metropolitan State University of Denver, and a Ph.D. in Geophysical Sciences from the Georgia Institute of Technology, in Atlanta, GA.



NOAA/OAR/AOML, Miami, Florida

### AMS Fellow Paul Judson DeMott

Senior Research Scientist Colorado State University, Fort Collins, Colorado

Paul DeMott is a Senior Research Scientist in the Department of Atmospheric Science at Colorado State University, where he also received his PhD and awards as Distinguished Administrative Professional and Distinguished Alumnus. Dr. DeMott has largely focused his career on advancing and improving understanding and measurements of ice nucleating particles and their relation to ice formation in clouds. His collaborative research has spanned the fields of aerosol studies, cloud physics, atmospheric chemistry and weather modification.



#### AMS Fellow Lesley-Ann L. Dupigny-Giroux



Professor University

Dr. Lesley-Ann Dupigny-Giroux is a professor in the Department of Geography at the University of Vermont, the Vermont State Climatologist, and the President-elect of the American Association of State Climatologists. She is the 2018 Association for Women Geoscientists Professional Excellence Award in the Academia/Research category; lead author for the Northeast Chapter of the Fourth National Climate Assessment of the U.S. Global Change Research Program, and the lead editor of Historical climate variability and impacts in North America.

University of Vermont, Burlington, Vermont

#### AMS Fellow James B. Edson



Dr. Edson is a marine meteorologist who studies the interaction between the ocean and atmosphere to improve marine weather forecasts. He received his Ph.D. in meteorology from Penn State in 1989. He spent 14 years at WHOI as a Scientist and 13 years at UConn as professor and head of marine sciences. He returned to WHOI in 2018 to continue his research on the turbulent exchange of momentum, heat and mass across the air-sea interface.

Marine Meteorologist, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts

## AMS Fellow Michael Bryan Ek

Director of the Joint Numerical Testbed NCAR, Boulder, Colorado

Michael Ek joined NCAR in 2018 as director of the Joint Numerical Testbed which supports transitioning research-tooperations. Before NCAR, Mike was deputy director at the Environmental Modeling Center of NOAA/NWS/NCEP. Previously he worked at Oregon State University on land and boundary-layer model development. He is a former AMS Hydrology Committee chair, and is involved with national and international activities in earth system model development. He received his Ph.D. from Wageningen University (The Netherlands) in 2005.



# AMS Fellow Alejandro V. Garcia, CBM

Chief Meteorologist KABB TV, San Antonio, Texas

Alex Garcia is the chief meteorologist and weather team leader for KABB/WOAI in San Antonio, Texas. He is a multi-disciplined individual with professional experience as an educator, broadcast meteorologist and entrepreneur. He holds several degrees and certifications. Alex serves on the AMS Board of Broadcast Meteorology Standing Panel. He also serves as chair of the AMS Board on Continuing Professional Development. Alex holds the AMS Certified Broadcast Meteorologist seal.

### AMS Fellow Bart Geerts



Dr. Bart Geerts conducts research into cloud-scale to mesoscale atmospheric processes, mainly using aircraft measurements and radar. He has (co-)authored ~100 papers in the AMS literature. Dr. Geerts has chaired the AMS Radar Meteorology Conference, served as editor for one of the AMS journals, served on several UCAR Committees and on several AMS STAC committees (Mesoscale Processes; Weather Modification; and Radar Meteorology).



University of Wyoming, Laramie, Wyoming

### AMS Fellow Wojciech Grabowski

Senior Scientist NCAR, Boulder, Colorado

Wojciech Grabowski is a senior scientist at NCAR's Mesoscale and Microscale Meteorology Laboratory and head of its Dynamical and Physical Meteorology Section. He is a Fellow of the Royal Meteorological Society and Titular Professor of Physical Sciences of the Republic of Poland.



### AMS Fellow Hoshin Vijai Gupta

Regents Professor University of Arizona, Tucson, Arizona

Hoshin Gupta's interest is in combining Physics-Based Knowledge with Machine Learning (via Information Theory) to develop Earth & Environmental Systems Models that can learn from interactions with the environment. In 2017 and 2018, he was ranked in the top 1% on the Clarivate "Highly Cited Researchers List" for Environment/Ecology. Hoshin is also a Fellow of the American Geophysical Union, and recipient of the AMS's R. E. Horton Lecturer Award (2017) and the EGU's Dalton Medal (2014).



#### AMS Fellow Janice Huff

Chief Meteorologist WNBC-TV, New York, New York

Chief meteorologist NBC 4 New York 1997-present, meteorologist weekend Today Show 1997-2012, host of Wednesday's Child quarterly adoption segment 1999-present. B.S. - Meteorology Florida State University 1982 (Grad Made Good 2002), Member: New York State Broadcaster's Hall of Fame, AMS, Alpha Kappa Alpha Sorority, National Association of Black Journalists, NWA. Recipient: Allen B. Dumont Broadcaster of the Year Award Montclair State University 2015, Nicholas Scoppetta Award for Service to Children 2012, Emmy for Best Weathercaster 1988, AMS TV Seal of Approval 1985.



#### AMS Fellow Stephen Klein

Research Meteorologist Lawrence Livermore National Laboratory, Livermore, California

Stephen Klein is a research meteorologist at Lawrence Livermore National Laboratory. His research interests center on clouds, specifically the role of clouds in climate change, and the representation of clouds in numerical models of the atmosphere.



### AMS Fellow John A. Knox

Professor University

John Knox is Professor of Geography and Undergraduate Coordinator of the Atmospheric Sciences Program at the University of Georgia (UGA) in Athens, Georgia. He earned a B.S. (mathematics) from the University of Alabama at Birmingham and a Ph.D. (atmospheric sciences) from the University of Wisconsin-Madison. He has taught over 6,000 students in his career at UGA and Valparaiso University. His research focus is atmospheric dynamics, including clear-air turbulence forecasting.

University of Georgia, Athens, Georgia

#### AMS Fellow Wen-Chau Lee

Senior Scientist NCAR, Boulder, Colorado

Wen-Chau Lee is a senior scientist and the facility manager of the Remote Sensing Facility/Earth Observing Laboratory at NCAR. His research focuses on internal airflow structures of high impact weather events using ground-based and airborne Doppler weather radars. He is the lead scientist of the next generation Airborne Phased Array polarimetric and Doppler Radar (APAR) at NCAR. He received his Ph.D in atmospheric sciences from the University of California, at Los Angeles, in 1988.

# AMS Fellow Zhiyong Meng

Professor and Associate Dean Peking University, Beijing, China

Zhiyong Meng (B.S. Peking University; M.S. Chinese Academy of Meteorological Sciences; Ph.D. Texas A&M University) is a professor of atmospheric sciences and associate dean of the School of Physics at Peking University, China. Her research focuses on the observation, dynamics, predictability, and data assimilation of mesoscale convective systems and tornadoes. She previously served on the AMS Committee on Mesoscale Processes and received the AMS Editor's Award. She currently serves on the WMO/WWRP PDEF Working Group.



### AMS Fellow Marc B. Parlange

Provost and Professor Monash University, Clayton, Victoria, Australia

Marc Parlange is the Provost of Monash University and is professor in the Department of Civil Engineering. His research with his graduate students and colleagues concerns the measurement and simulation of air and water flows over complex terrain, with a focus on how air turbulence and atmospheric dynamics (atmospheric boundary layer flow) influence urban, agricultural and alpine environments.





### AMS Fellow Courtney Schumacher

Professor Texas A&N

Dr. Courtney Schumacher received her Ph.D. from the University of Washington and has been on the faculty of the Department of Atmospheric Sciences at Texas A&M University since 2003. Dr. Schumacher's research focuses on tropical meteorology, mesoscale dynamics and storm-climate interactions, with radar as a favorite tool. She is active in both field- and space-based research and is passionate about her role as a teacher-scholar.

Texas A&M University, College Station, Texas

### AMS Fellow Adam Sobel

Professor Columbia

Adam Sobel is a professor at Columbia University's Lamont-Doherty Earth Observatory and Engineering School. He studies the dynamics of climate and weather phenomena, particularly in the tropics, and directs the Columbia Initiative on Extreme Weather and Climate. He is author or co-author of over 150 peer-reviewed scientific articles, as well as a popular book, Storm Surge, about Hurricane Sandy. He and his wife live in New York City; their two sons are in college.

Columbia University, New York, New York

#### AMS Fellow Juanzhen Sun

Senior Scientist NCAR, Boulder, Colorado

Dr. Juanzhen Sun is a senior scientist at the National Center for Atmospheric Research. Her research interest includes mesoscale data assimilation, high impact weather prediction and predictability, convective-scale dynamics, and ensemble prediction. She served in various international committees and led a worldwide effort on bridging the gap of NWP and nowcasting for high impact weather prediction. Dr. Sun is also recognized for her effort at serving the society by transferring research to weather forecast operation.



#### AMS Fellow Wassila Mamadou Thiaw

Team Leader NOAA/NWS/NCEP, College Park, Maryland

Dr. Wassila Mamadou Thiaw is a meteorologist and the Team Leader of NCEP/CPC's International Desks. He has worked extensively on climate monitoring and forecasting for Africa and the tropics. The International Desks supports the U.S. Government humanitarian mission oversee. Dr. Thiaw also leads the CPC residency training program for scientists from developing countries. He was a NAS/NRC postdoc fellow at NOAA/NESDIS. He's served on the AMS Council and in various AMS and WMO committees.



### AMS Fellow Mingfang Ting

Professor and Associate Director Lamont-Doherty Earth Observatory of Columbia University, Palisades, New York

Dr. Ting is a Lamont Research Professor and associate director at the Lamont-Doherty Earth Observatory of Columbia University. Her research spans a broad range of topics in climate variability and change, focusing on identifying the role of anthropogenic forcing and natural climate processes in Asian monsoon changes, North American droughts and heat waves, and the Atlantic Multidecadal Variability and its impact on Atlantic hurricane activities. She serves as editor of *Journal of Climate*.



### AMS Fellow Carolina Vera

Professor, CIMA/University of Buenos Aires-CONICET, Buenos Aires, Argentina

Carolina Vera is full professor of atmospheric sciences at the University of Buenos Aires, Argentina. Carolina's research has focused on the understanding and prediction of climate variability in South America, and on regional climate change assessments. She has participated in integrated projects focused on developing climate information for decision making at different socio-economic sectors, as agriculture, and disaster risk management. She has also had key roles in panels like WCRP and IPCC.

# AMS Fellow Claudia Wagner-Riddle

Professor University

Claudia Wagner-Riddle is a professor of agricultural meteorology at the University of Guelph, Canada. Claudia leads an internationally-renowned research program on greenhouse gas emissions from agroecosystems and has contributed significant new understanding of freeze/thawinduced nitrous oxide emissions from soils. She has authored over 125 peer-reviewed papers and been an exemplary mentor for the next generation of agrometeorologists. She is a fellow of the Soil Science Society of America and Editor-in-Chief of *Agricultural and Forest Meteorology*.



University of Guelph, Guelph, Ontario, Canada

#### AMS Fellow Tammy M. Weckwerth

Scientist NCAR, Boulder, Colorado

Dr. Tammy M. Weckwerth is a scientist in NCAR's Earth Observing Laboratory (EOL). As an observationalist, Weckwerth has participated in 18 field campaigns, both as a principal investigator (PI) and to assure optimal data collection by EOL's radars and lidars in support of diverse research objectives defined by other PIs. Weckwerth's research foci include mesoscale meteorology, organized structures within the planetary boundary layer, and the initiation of thunderstorms.



# AMS Fellow Ming Xue

Chair and Professor CAPS, University of Oklahoma, Norman, Oklahoma

Dr. Ming Xue, Ph.D., University of Reading, is currently the Weathernews Chair and George Lynn Cross Research Professor in School of Meteorology, University of Oklahoma (OU), and the director for the Center for Analysis and Prediction of Storms (CAPS) at OU. His research areas include weather dynamics, predictability, data assimilation, numerical modeling, and weather and environmental predictions. He is the primary developer of the Advanced Regional Prediction System (ARPS) and its ensemble data assimilation system.

#### Local Chapter of the Year Award Asheville North Carolina Chapter Asheville, North Carolina

For excellent outreach and support to students, providing effective networking opportunities, and notable interactions with the national Society



#### Local Student Chapter of the Year Award **Ohio** University Student Chapter

Athens, Ohio

For outstanding commitment to providing educational, mentoring, and networking opportunities to members, and for exemplary community service



#### The Spiros G. Geotis Student Prize David Schvartzman

Research Associate, CIMMS, The University of Oklahoma, Norman, Oklahoma

For his paper, "Design of Practical Pulse Compression Waveforms for Polarimetric Phased Array Radar"



David Schvartzman is a research associate at the Cooperative Institute for Mesoscale Meteorological Studies (CIMMS), the University of Oklahoma, and the NOAA National Severe Storms Laboratory (NSSL). He received the M.S. degree in Electrical and Computer Engineering from the University of Oklahoma, Norman, OK, USA, in 2015, and is currently a Ph.D. candidate at the University of Oklahoma. His research interests include phased array radars, radar signal processing, modeling and simulation, and numerical optimization.

#### The Award for An Exceptional Specific Prediction NOAA/National Weather Service Omaha/Valley, Nebraska

For accurate, timely, and life-saving predictions of hydrometeorological conditions that led to the catastrophic, historic spring flooding across Nebraska in March 2019



The National Weather Service Omaha is honored for commitment to life-saving customer service and forecast performance before, during and after Nebraska's worst flood in recorded history. They demonstrated exceptional scientific expertise, collaborative partnership and leadership. The staff provided seamless, uninterrupted continuity of operations during an unprecedented 8-day emergency evacuation of NWS Omaha. Though directly impacted by the disaster, working at 4 different locations, they provided emergency decision support services, forecasts, warnings, and emergency notification.

#### Editor's Award - Journal of Atmospheric Science Adele Igel

Assistant Professor, University of California, Davis, California

For numerous highly thoughtful, constructive, well-written and timely reviews in the area of cloud physics



Dr. Adele Igel is an assistant professor at the University of California, Davis where she runs a research group that focuses on cloud microphysics, aerosol-cloud interactions, and numerical modeling. Adele is currently an associate editor of the Journal of Atmospheric Science and has helped to organize the Annual Meeting's Aerosol-Cloud-Climate Symposium for the past three years. She earned her Ph.D. in atmospheric science from Colorado State University in 2015.

#### Editor's Award - Journal of Applied Meteorology and Climatology Brian Joseph Squitieri

Mesoscale Assistant/Fire Weather Forecaster, NOAA/NWS/Storm Predication Center, Norman, Oklahoma

For several insightful, careful reviews that were useful to the editor and the authors



Brian Squitieri completed his B.S. in meteorology at the University of Oklahoma in 2012, followed by an M.S. in meteorology at Iowa State University in 2014. He began pursuing a Ph.D. at Iowa State in 2015 and continues to work on his degree remotely while also working as a Mesoscale Assistant/Fire Weather Forecaster at the Storm Prediction Center in Norman, Oklahoma. His primary interests involve convection-allowing numerical modeling and severe storms forecasting.

#### Editor's Award - Journal of Climate Isla R. Simpson Scientist, Climate and Global Dynamics Laboratory, NCAR, Boulder, Colorado

For a large number of detailed reviews that substantially improved the quality of manuscripts



After receiving her Ph.D. from Imperial College London in 2009, Isla subsequently worked as a postdoctoral fellow at the University of Toronto and Lamont-Doherty Earth Observatory. Since 2015 she has worked as a scientist in the Climate and Global Dynamics Laboratory of the National Center for Atmospheric Research. Isla works on large-scale atmospheric dynamics and global climate modelling, aiming to understand dynamical mechanisms involved in climate variability and change and asses their representation in global climate models.

#### Editor's Award - Journal of Atmospheric and Oceanic Technology Sebastian Torres

Assistant Director, CIMMS, The University of Oklahoma, Norman, Oklahoma

For providing thorough reviews that have helped the decision-making process in controversial situations



Dr. Torres is a senior research scientist and the assistant director of the Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU). He received his Ph.D. in electrical engineering from OU and has been with CIMMS since 1997. As the leader of the Advanced Radar Techniques team at the National Severe Storms Laboratory, his research interests include radar signal processing and the use of phased-array radars for weather observations.
#### Editor's Award - Monthly Weather Review Eric Gilleland Statistician, NCAR, Boulder, Colorado

For timely reviews that expose the importance of novel research while contributing to improved and ultimately impactful manuscripts



Statistician that has been with National Center for Atmospheric Research for over 20 years starting as a student with over 15 years as a scientist.

#### Editor's Award - Weather and Forecasting Casey E. Davenport

Assistant Professor, University of North Carolina at Charlotte, Charlotte, North Carolina

For consistently providing timely, balanced, constructive, and thorough reviews, while accepting all review invitations



Dr. Casey Davenport is an assistant professor of meteorology at the University of North Carolina at Charlotte, where she teaches courses in dynamics, computer programming, and numerical modeling. She received her B.S. in meteorology from Valparaiso University, and her M.S. and Ph.D in atmospheric science from North Carolina State University. Her research interests include the impact of environmental variability on the evolution of severe storms, as well as topics related to science education.

### Editor's Award - Journal of Physical Oceanography Jacob O. Wenegrat

Assistant Professor, University of Maryland College Park, College Park, Maryland

For outstanding and prompt reviews on a wide variety of topics, spanning the subfields of several of the journal's editors



Jacob Wenegrat is an assistant professor in the department of atmospheric and oceanic science at the University of Maryland, College Park. His work focuses on submesoscale ocean dynamics, using a combination of theory and numerical modeling, with recent research topics including instabilities of the ocean bottom boundary layer, submesoscale effects on the large-scale circulation, and the atmospheric response to small-scale ocean fronts. He holds a Ph.D. in oceanography (2015) from the University of Washington.

#### Editor's Award - Journal of Hydrometeorology Ardeshir Ebtehaj

Assistant Professor, University of Minnesota, Minneapolis, Minnesota

For consistently thorough and timely reviews of submissions describing highly complex mathematical concepts



Ardeshir Ebtehaj is an assistant professor of civil and geoengineering at the University of Minnesota. His research aims to advance understanding of hydrometeorological processes with particular emphasis on satellite hydrology, land-atmosphere interactions and data assimilation. Ardeshir holds a Ph.D. in civil engineering and an M.Sc. in mathematics from the University of Minnesota. Ardeshir has two years of postdoctoral experience at Georgia Tech and is a recipient of the NASA's new investigator award in earth science.

# Editor's Award - Weather, Climate, and Society Serge Soula

Professor, University of Toulouse, Toulouse, France

For reviews of a challenging manuscript that were instrumental in helping the authors make it ready for publication



Professor Serge Soula from University of Toulouse has a strong experience in observation and analysis of thunderstorm activity, especially using lightning flash detections. He has a good experience in lightning physics, based on several research projects, on collaborations throughout European projects, and on reviews of many papers. He has a good knowledge in cloud physics. He is author of sixty publications in peer-reviewed journals on thunderstorm electricity, including lightning climatology and lightning flash characteristics.

#### Editor's Award - Bulletin of the American Meteorological Society Tim Boyer

Oceanographer, NOAA/NCEI, Silver Spring, Maryland For exceptionally careful, thoughtful, and constructive reviews that helped authors greatly improve their manuscripts



Tim Boyer has worked at NOAA/National Centers for Environmental Information (NCEI) since graduating from Old Dominion University with a Master's Degree in physical oceanography in 1992. He has been involved in the development of subsurface ocean profile databases, the calculation of subsurface oceanographic climatological mean fields, and research into ocean heat content and ocean freshwater content and their relation to the Earth's climate system. He is currently a Ph.D. candidate at the University of Maryland.

#### Editor's Award - Bulletin of the American Meteorological Society Robert M. Banta

Senior Research Meteorologist, CIRES, Boulder, Colorado

#### For thorough, insightful, and impartial reviews of a particularly provocative manuscript



Bob Banta is a senior research meteorologist with the Cooperative Institute for Research in Environmental Sciences, located in the Atmospheric Remote Sensing Branch, Chemical Sciences Division, of NOAA's Earth System Research Lab in Boulder, from which he recently retired. He performs basic research into the atmospheric boundary layer and mesoscale processes using lidar systems, including Doppler lidar, with applications to air quality, NWP improvement, aviation, emergency response, and wind and renewable energy.

### Editor's Award - Journal of Climate Agus Santoso

Senior Research Scientist, University of New South Wales, Sydney, Australia

For consistently high-quality reviews on various topics in tropical climate dynamics



Dr. Agus Santoso is a senior research scientist at the University of New South Wales in Sydney, Australia, and an adjunct science leader at the Commonwealth Scientific and Industrial Research Organisation. He is currently a project leader at the Centre for Southern Hemisphere Oceans Research (CSHOR) investigating the dynamics of the El Niño Southern Oscillation and the Indian Ocean Dipole. He has served in the World Climate Research Programme CLIVAR Pacific Regional Panel.

## Editor's Award - Journal of Climate Sergey K. Gulev

Head of Sea-Air Interaction and Climate Lab, P. P. Shirshov Institute of Oceanology, Moscow, Russian Federation

For timely, detailed reviews and advice that consistently ensured the high caliber of manuscripts accepted for publication



Sergey Gulev is a head of Sea-Air Interaction and Climate Lab at Shirshov Institute of Oceanology and professor of Moscow State University. He is interested in air-sea interaction and large-scale climate variability and change. Sergey developed observational and model-based analyses of surface fluxes and turbulence, wind waves, ocean circulation, extratropical and tropical cyclones and hydrological cycle. He is author or coauthor of more than 100 peer reviewed papers and several books and book chapters.

#### Editor's Award - Monthly Weather Review and Weather and Forecasting Glen S. Romine Research Scientist, NCAR, Boulder, Colorado



Glen Romine is a research scientist in the Mesoscale and Microscale Meteorology Laboratory at the National Center for Atmospheric Research. He received his Ph.D. in atmospheric science from the University of Illinois Urbana-Champaign in 2008 and has been at NCAR since 2009. His research interests include investigating the behavior and predictability of severe thunderstorms and other high-impact weather phenomena using ensemble analysis and forecasting with an aim to improve prediction and subsequent decision-making.

For providing numerous high-quality reviews that consistently assisted authors in improving their papers

#### Editor's Award - Journal of Applied Meteorology and Climatology Philip T. Bergmaier

Postdoctoral Associate, University of Wyoming, Laramie, Wyoming

For several insightful, careful reviews that were useful to the editor and the authors



Phil Bergmaier is a postdoctoral associate with the Wyoming NASA Space Grant Consortium at the University of Wyoming. His work focuses primarily on high-altitude ballooning for K-12 science outreach. Originally from Pennsylvania, Phil received his B.S. in meteorology from Millersville University and both his M.S. and Ph.D. in atmospheric science from the University of Wyoming. A recent graduate, his research has dealt mainly with mesoscale and boundary layer meteorology, and more specifically lake-effect snowstorms.

#### Editor's Award - Journal of Hydrometeorology Xiaodong Chen

Postdoctorate Research Associate, PNNL, Richland, Washington

For numerous thorough reviews of submissions on the modeling of land-atmosphere interactions



Xiaodong Chen is a postdoctorate research associate at Pacific Northwest National Laboratory. His research interests include extreme precipitation, snow activities, and floods under climate change, as well as the applications of remote sensing data, multi-scale climate modeling and machine learning in engineering hydrology. He is an associate editor for Journal of Hydrometeorology since 2018. He received his Ph.D. in civil engineering from the University of Washington.

#### Editor's Award - Journal of Atmospheric Sciences Christopher E. Holloway

Associate Professor, University of Reading, Reading, United Kingdom

For thorough and insightful reviews in the area of tropical convection



Christopher Holloway has been interested in weather and storms from a young age. He received an A.B. in earth and planetary sciences from Harvard in 2001 and a Ph.D. in atmospheric and oceanic sciences from UCLA in 2008 (working with David Neelin). After that, he did a postdoctoral at the University of Reading and is now an associate professor there studying tropical convection and its relationship to the largescale environment and circulation.

#### The Award for Distinguished Science Journalism in the Atmospheric and Related Sciences Paul Voosen

Earth and Planetary Science Reporter, Science, Washington, D.C.

For clearly written and compelling journalism that highlighted a new and innovative effort using artificial intelligence to improve climate projections



Paul joined *Science* in 2016 as its earth and planetary science reporter, covering everything from Saturn's rings to climate modeling. He previously worked at *Greenwire* and the *Chronicle of Higher Education*. Paul lives in Washington, D.C., with his wife and their 2-year-old son. A graduate of Boston College and Columbia University, Paul has received the Perlman news award from the AGU and been named an emerging writer at the Mayborn Literary Nonfiction Conference.

### The Louis J. Battan Author's Award, Adult Jeff Goodell

Author and Contributing Editor, *Rolling Stone*, New York, New York For The Water Will Come, an engaging and informative consideration of a subject that is critically important to a broad audience



Jeff Goodell's most recent book, *The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of the Civilized World,* was a *New York Times* Critics Top Book of 2017. He is the author of five previous books, including *Big Coal: The Dirty Secret Behind America's Energy Future*. He is a contributing editor at *Rolling Stone,* where he has covered climate change for more than a decade. Jeff has served as a commentator on energy and climate issues.

#### The Louis J. Battan Author's Award, K-12 Megan Herbert Author and Illustrator, Freelancer

*For* The Tantrum That Saved the World, which engages readers with empathy and compassion and empowers them to help save animals and people from the threat of climate change



Megan Herbert is an Australian-born writer and illustrator whose career writing television and films, designing products, cartooning, and creating children's books has spanned twenty years. In 2017 her carbon-neutral climate change kids' book, The Tantrum That Saved The World, was awarded a 2018 Moonbeam Award for books about Environmental Issues. In 2019, she was named Artist for the Earth by The Earth Day Network. She lives with her husband and young son in Amsterdam.

### The Louis J. Battan Author's Award, K-12 Michael E. Mann

Professor and ESSC Director, The Pennsylvania State University, University Park, Pennsylvania

*For* The Tantrum That Saved the World, which engages readers with empathy and compassion and empowers them to help save animals and people from the threat of climate change



Dr. Mann is Distinguished Professor and ESSC Director at Penn State. He has received numerous awards including the EGU Hans Oeschger Medal, the AAAS Public Engagement with Science Award and the Tyler Prize. He made Bloomberg News' list of fifty most influential people in 2013 and has authored more than 200 publications, and four books including *Dire Predictions, The Hockey Stick and the Climate Wars, The Madhouse Effect,* and *The Tantrum that Saved the World.* 

### The Walter Orr Roberts Lecturer in Interdisciplinary Sciences Walker S. Ashley

Professor, Northern Illinois University, DeKalb, Illinois

For extraordinary, interdisciplinary contributions to the scientific intersection of extreme weather and societal vulnerability



Walker Ashley is a professor at Northern Illinois University, where he specializes in severe storms and societal impacts research. He received an M.S. from the University of Nebraska and B.S. and Ph.D. from the University of Georgia. He is a Certified Consulting Meteorologist and serves as an editor for *Weather, Climate, and Society*.

# The Robert E. Horton Lecturer in Hydrology Terri S. Hogue

Professor, Colorado School of Mines, Golden, Colorado

#### For pioneering work on land-atmosphere-water interactions in urban environments



Terri Hogue is a professor and department head in the Department of Civil and Environmental Engineering at the Colorado School of Mines. Her research focuses on understanding hydrologic and land surface processes, with an emphasis on human interactions with water cycling and management. Projects include urban-ecosystem dynamics, wildfire impacts on water supply, and hydrologic response to climate change. Much of her work has involved development of decision support tools and optimization of hydrologic forecasts.

#### The Nicholas P. Fofonoff Award - Early Career Laure Zanna

Associate Professor, Courant Institute of Mathematical Sciences, New York University, New York, New York

For exceptional creativity in the development and application of new concepts in ocean and climate dynamics



Laure Zanna's research focuses on the role of the oceans in climate. Specifically, she works on understanding processes governing ocean heat uptake, sea level rise, mid-latitude predictability, and ocean turbulence. She received a Ph.D. from Harvard University in 2009 and then spent ten years at the University of Oxford, first as a postdoctoral fellow from 2009 to 2011, and then as an associate professor. She joined the faculty at New York University in September 2019.

#### The Henry G. Houghton Award - Early Career Matthew R. Kumjian

Associate Professor, The Pennsylvania State University, University Park, Pennsylvania

For outstanding and pioneering contributions that have advanced our understanding of precipitation physics through the novel use and application of dual-polarization radar observations



Matthew Kumjian is an associate professor of meteorology at The Pennsylvania State University, where his research specialty is using polarimetric radar and numerical modeling to better understand precipitation physics. Prior to coming to Penn State, he was an Advanced Study Program postdoctoral researcher at the National Center for Atmospheric Research. He received his B.S., M.S., and Ph.D. in meteorology from the University of Oklahoma. He also serves as an editor for *Monthly Weather Review*.

#### The Clarence Leroy Meisinger Award - Early Career Elizabeth A. Barnes

Associate Professor, Colorado State University, Fort Collins, Colorado

For fundamental contributions to our understanding of the extratropical circulation and its response to climate change



Dr. Elizabeth Barnes is an associate professor of atmospheric science at Colorado State University. She joined the faculty in 2013 after obtaining dual B.S. degrees in physics and mathematics from the University of Minnesota and her Ph.D. in atmospheric science from the University of Washington. Professor Barnes' research is focused on large-scale atmospheric variability and change as well as the data analysis tools used to understand its dynamics.

# The Charles L. Mitchell Award Jeffrey S. Tongue

Professor, Suffolk County Community College, Brentwood, New York

For a career devoted to improving the safety and efficiency of aviation throughout our National Airspace System



Jeffrey Tongue was the Science and Operations Officer for the New York, NY National Weather Service Forecast Office for nearly 25 years. He retired in 2018. Jeff holds a B.S. with honors from the State University of New York at Oneonta and a M.S. from Texas A&M. He is a retired U.S. Air Force Lieutenant Colonel having served 24 years active and reserve. Currently, Jeff teaches meteorology at Suffolk County Community College and Stony Brook University.

#### The Award for Excellence in Science Reporting by a Broadcast Meteorologist Kait Parker

Producer and Reporter, The Weather Company, Atlanta, Georgia For educating the public on the causes and harmful consequences of climate change, through daily reporting and documentary projects



Kait Parker produces climate and environmental documentaries and reports on weather and climate for Weather.com. She also hosts a podcast, *Warming Signs*, focused on the intersection of science and society. With more than a dozen years professional experience as a broadcast meteorologist, she was awarded the CBM in 2012. Recognition for her reporting includes a national Emmy nomination, New York Press Club Award of Excellence, and The Society of Professional Journalists Sigma Delta Chi Award.

# The Award for Broadcast Meteorology Alan Sealls, CBM

Broadcast Meteorologist, Mobile, Alabama

For a career of providing weather information to the public in relatable, entertaining terms, and for benefiting students of all ages and the meteorological community



Alan Sealls is an AMS Fellow and Past President of NWA. He served on Council for both organizations. Alan holds meteorology degrees from Cornell and from FSU. With more than two dozen regional, state and local awards, Alan has also written and produced four dozen weather videos for schools, used around the United States. Outside of his broadcast meteorology career and community outreach, Alan teaches weather broadcasting at the University of South Alabama.

# The Joanne Simpson Mentorship Award Anne R. Douglass

#### NASA GSFC/ACD, Greenbelt, Maryland

For patient guidance and boundless encouragement of young scientists, and for leading by example as a researcher, writer, and project scientist



Anne Douglass of NASA Goddard's Atmospheric Chemistry and Dynamics Laboratory has built numerical models that are used to predict the future of the stratospheric ozone layer on a foundation of satellite measurements of ozone and relevant trace gases. This research prepared her to be project scientist for Aura, one of the Earth Observing System flagship missions. Experience with a growing family developed skills to listen and guide scientists at earlier stages in their careers.

# The Edward N. Lorenz Teaching Excellence Award John A. Knox

Professor, University of Georgia, Athens, Georgia

For innovative and engaging approaches to teaching and mentoring, and tireless efforts in support of life-long student learning



John Knox is Professor of Geography and Undergraduate Coordinator of the Atmospheric Sciences Program at the University of Georgia (UGA) in Athens, Georgia. He earned a B.S. (mathematics) from the University of Alabama at Birmingham and a Ph.D. (atmospheric sciences) from the University of Wisconsin-Madison. He has taught over 6,000 students in his career at UGA and Valparaiso University. His research focus is atmospheric dynamics, including clear-air turbulence forecasting. He is a 2020 AMS Fellow.

#### The Award for Outstanding Services by a Corporation Ball Aerospace

Boulder, Colorado

For designing and building proven advanced remote-sensing instruments and spacecraft enabling timely, accurate weather predictions and environmental monitoring to ensure a Weather Ready Nation



Powered by endlessly curious people with an unwavering mission focus, Ball Aerospace pioneers discoveries that enable its customers to perform beyond expectation and protect what matters most. Ball creates innovative space solutions, enables more accurate weather forecasts, drives insightful observations of our planet, delivers actionable data and intelligence, and ensures those who defend our freedom go forward bravely and return home safely.

#### Special Award **NOAA/National** Weather Service, Houston/Galveston, Texas

#### For bravery and dedication in providing accurate and timely life-saving services in confronting catastrophic flooding from Hurricane Harvey, despite enduring personal loss and prolonged stress



The National Weather Service's Houston/Galveston forecast office continued to provide proactive, accurate, and timely services as Hurricane Harvey produced historic and catastrophic flooding across all of southeast Texas. These outstanding, life-saving services never wavered despite flooding directly threatening employees' own families and homes, trapping the majority of the staff for up to 6 days at the office.

# Banner I. Miller Award Jun A. Zhang

Scientist, University of Miami/CIMAS, Miami, Florida

For their paper, "Evaluating the impact of improvements in the boundary layer parameterization on hurricane intensity and structure forecasts in HWRF," which significantly advanced the prediction of hurricanes in an operational numerical weather prediction model



Dr. Jun Zhang is a scientist at the University of Miami. His research interests include hurricane boundary-layer structure and dynamics, air-sea interaction, physical parameterizations, and hurricane intensity change. Dr. Zhang has published over 80 peer-reviewed journal papers. Dr. Zhang has flown hurricane aircraft missions with more than 100 eyewall penetrations. Dr. Zhang has received the CIMAS Gold Medal Award, the NASA Award for Hurricane and Severe Storm Sentinel Group Achievement, and the Aviation Laureate Award.

#### Banner I. Miller Award David S. Nolan

Professor and Chair, University of Miami/CIMAS, Miami, Florida

For their paper, "Evaluating the impact of improvements in the boundary layer parameterization on hurricane intensity and structure forecasts in HWRF," which significantly advanced the prediction of hurricanes in an operational numerical weather prediction model



Dave Nolan earned a B.A. in Physics in 1990 and a Ph.D. in Earth and Planetary Sciences in 1996, both from Harvard University. He held post-doc and scientist positions at Berkeley, Colorado State, and Princeton, before becoming a faculty member at the Rosenstiel School of Marine and Atmospheric Sciences. His research topics include hurricanes, tornadoes, and tropical convection. He is currently Chair of the Department of Atmospheric Sciences.

# Banner I. Miller Award Robert F. Rogers

Research Meteorologist, NOAA/AOML Hurricane Research Division, Miami, Florida

For their paper, "Evaluating the impact of improvements in the boundary layer parameterization on hurricane intensity and structure forecasts in HWRF," which significantly advanced the prediction of hurricanes in an operational numerical weather prediction model



Dr. Robert F. Rogers, a research meteorologist at the NOAA/AOML Hurricane Research Division (HRD), conducts research on hurricane structure and intensity change using data collected from NOAA's aircraft as well as numerical models. He has led the annual HRD Hurricane Field Program and has been actively involved with field campaigns sponsored by NASA, NSF, ONR, and several international TC research programs. He received his Ph.D in Meteorology from The Pennsylvania State University in 1998.

#### Banner I. Miller Award

Chief, Modeling and Data Assimilation Branch, NOAA/NWS/NCEP Environmental Modeling Center, College Park, Maryland

For their paper, "Evaluating the impact of improvements in the boundary layer parameterization on hurricane intensity and structure forecasts in HWRF," which significantly advanced the prediction of hurricanes in an operational numerical weather prediction model



Dr. Vijay Tallapragada is the Chief of Modeling and Data Assimilation Branch at NOAA Environmental Modeling Center (EMC), leading the development and advancement of operational NWP systems including the Global Forecast System (GFS). He is also the Development Manager for Hurricane Forecast Improvement Project (HFIP) and enabled transition of advanced research into operations for NOAA's flagship HWRF for global tropical cyclone predictions. He received his Ph.D. in Tropical Meteorology from Andhra University, India in 2000.

#### The Award for Outstanding Achievement in Biometeorology Elizabeth Pattey

Principal Research Scientist, Agriculture and Agri-Food Canada, Ottawa, Canada For pioneering the development of systems that measure surface layer turbulence and the nocturnal boundary layer to quantify particulate matter and trace gas fluxes



Elizabeth Pattey is Principal Research Scientist at Agriculture and Agri-Food Canada, and Editor for Agricultural and Forest Meteorology. She greatly expanded the number of trace gas species, for which turbulent fluxes could be quantified, using relaxed eddy accumulation. She scaled-up fluxes from fields to region using nocturnal boundary layer properties and quantified regional greenhouse gas fluxes by providing analytical capacity to flux instrumented aircraft. Dr. Pattey received her Ph.D. degree (1990) from Laval University, Canada.

#### The Helmut E. Landsberg Award Alberto Martilli

Scientist, CIEMAT, Madrid, Spain

For leadership in the field of urban boundary-layer science, and seminal contributions to the modeling of urban canopy processes



Alberto Martilli is a scientist at the Research Center for Energy, Environment, and Technology (Madrid, Spain). He received his Physics degree from the University of Milan (Italy), and a Ph.D. from the Swiss Federal Institute of Technology of Lausanne. His research includes mesoscale meteorology, boundary layer turbulence, and, in particular, urban atmosphere that he investigates with micro and mesoscale models to improve our understanding of the interactions between urban forms, citizen activities, and the atmosphere.

#### The Francis W. Reichelderfer Award Jeffrey D. Lindner

Director of HCFCD Flood Operations, Harris County Flood Control District, Houston, Texas

For lifesaving communication of critical weather and flood information to the residents of the Houston area during catastrophic flooding from Hurricane Harvey



Jeff has been with the Harris County Flood Control District for 16 years and is currently the Chief meteorologist and Director of the District's Hydrologic Operations Division. He holds a Bachelor of Science in meteorology from Texas A&M University and is a member of numerous meteorological, hydrological, and emergency management organizations.
# The Charles E. Anderson Award Gregory S. Jenkins

Professor, The Pennsylvania State University, University Park, Pennsylvania

For tireless and sustained contributions to the promotion of diversity in atmospheric science through education, community service, and engaging students in internationally-focused research



Gregory Jenkins is a native of Philadelphia, Pennsylvania, and is currently a professor in the Department of Meteorology and Atmospheric Sciences at Penn State University He serves as director of the Alliance for Education, Sciences, Engineering and Design Africa (AESEDA) and the EnvironMentors program. He received his B.S. in Physics from Lincoln University and his M.S. and Ph.D. degrees in Atmospheric and Space Sciences from the University of Michigan.

#### The Henry T. Harrison Award for Outstanding Contributions by a Consulting Meteorologist Carl A. Mazzola, CCM

Senior Consultant and Subject Matter Expert, Project Enhancement Corporation, Evans, Georgia For updating and facilitating the development of meteorological standards for the nuclear industry, and providing innovative consulting services to clients with utmost integrity



Mr. Mazzola received his CCM in January 1985. He is a senior consultant and subject matter expert with more than 49 years of professional applied meteorology experience in the nuclear industry. He has provided senior-level consultation to the Department of Energy Offices of Emergency Management and Nuclear Safety and at various DOE locations, and to nuclear utilities. Most projects focused on environmental management, risk management, chemical safety, nuclear safety, software quality assurance and emergency preparedness.

### The Award for Outstanding Contribution to the Advance of Applied Meteorology Robert Sharman

Project Scientist, NCAR, Boulder, Colorado

For transformative research into aircraft turbulence, leading to the development of innovative operational turbulence reporting and forecasting systems



Dr. Sharman is a project scientist at the Research Applications Laboratory, National Center for Atmospheric Research. He received his Ph.D. in atmospheric sciences from UCLA in 1981. His research interests include upper level gravity waves and turbulence characterization applied to aviation turbulence forecasts. He has authored or co-authored over 70 journal articles on these and other subjects. He is an AMS Fellow and recipient of the Scientific American Top 50 Scientists Award for 2003.

#### The Kenneth C. Spengler Award

For enabling and supporting a community of research and operational weather modeling through the **Advanced Research version of the Weather Research and Forecasting Model (WRF-ARW)** 

Joseph B. Klemp William C. Skamarock John G. Michalakes Jimy Dudhia Wei Wang Jordan G. Powers David Gill



Michael G. Duda Kelly K. Werner Ming Chen

Cindy L. Bruyère James F. Bresch **Ying-Hwa Kuo** Zhiquan (Jake) Liu Dale M. Barker Xiang-Yu Huang Jamie Bresch

#### The Cleveland Abbe Award for Distinguished Service to the Atmospheric and Related Sciences Carolina Vera

Professor, CIMA, University of Buenos Aires, Buenos Aires, Argentina

For unselfish devotion to advancing and communicating climate science to decision makers and stakeholders in South America and across the world



Carolina Vera is full professor of atmospheric sciences at the University of Buenos Aires, Argentina. Carolina's research has focused on the understanding and prediction of climate variability in South America, and on regional climate change assessments. She has participated in integrated projects focused on developing climate information for decision making at different socio-economic sectors, as agriculture, and disaster risk management. She has also had key roles in panels like WCRP and IPCC.

### The Charles Franklin Brooks Award for Outstanding Service to the Society Robert M. Rauber, CCM

Director, School of Earth, Science and Environment, University of Illinois at Urbana-Champaign, Urbana, Illinois For extraordinary contributions that have had a significant impact on the Society as publications commissioner, chief editor, and service on numerous STAC and other committees



Professor Rauber has a 32 year career as a faculty member at the University of Illinois at Urbana-Champaign, is currently the Director of the School of Earth, Society and Environment, and was Head of the Department of Atmospheric Sciences at Illinois for 12 years prior to assuming the directorship. He is a Fellow and former Publications Commissioner of the of the American Meteorological Society, and author of several textbooks.

# The David and Lucille Atlas Remote Sensing Prize Ping Yang

Professor, Texas A&M University, College Station, Texas

For sustained, seminal contributions to developing light-scattering and radiative transfer models and dust aerosols



Dr. Yang was a department head (2012-2018), is currently a professor, and holds the David Bullock Harris Chair at TAMU. He has published 324 journal papers and 4 books (one in press), and received the 2017 NASA Exceptional Scientific Achievement Medal and the 2013 AGU Ascent Award. He is a Fellow of AGU, AMS, American Physical Society, Optical Society of America, and The Electromagnetics Academy. He earned his Ph.D. degree at the University of Utah.

# The Jule G. Charney Medal Qiang Fu

Professor, University of Washington, Seattle, Washington

For pioneering contributions to the theory and practice of atmospheric radiative transfer and its critical linkages to climate and climate change



Dr. Qiang Fu is a professor in the Department of Atmospheric Sciences, University of Washington. His research interests include atmospheric radiation and clouds, remote sensing of atmosphere, and climate and climate change. Before joining the University of Washington in 2000, Fu was an associate professor in the Department of Oceanography, Dalhousie University. Fu received his B.S. and M.S. degrees from Peking University, and Ph.D. from University of Utah. He is a Fellow of AMS, AGU, and AAAS.

# The Sverdrup Gold Medal Peter R. Gent

Senior Research Associate, National Center for Atmospheric Research, Boulder, Colorado

For fundamental contributions to understanding the ocean's role in climate and its representation in Earth system models



Peter Gent received his degrees in mathematics from the University of Bristol. He moved to NCAR in 1976, and has spent his entire career there. Peter first studied equatorial oceanography, but then moved on to models of the global ocean circulation. He is best known for a parameterization of the effects of ocean mesoscale eddies, which are not resolved in most climate models. In his free time, Peter enjoys watching birds and following England cricket.

## The Verner E. Suomi Technology Medal Joshua Wurman

President, Center for Severe Weather Research, Boulder, Colorado

For the innovative design, development, and provision of mobile Doppler radars, making possible unprecedented high-resolution wind and precipitation observations in high-impact weather



After a non-linear path through MIT, including mediocre grades and dropping out for 3 years before returning to complete his Sc.D about microbursts, Josh invented bistatic multiple-Doppler networks and went to NCAR to build some. Getting distracted and switching gears, he invented the Doppler On Wheels (DOW) radar network, and professored at OU while collecting interesting observations inside tornadoes, hurricanes, coastal and mountain blizzards, wildfires, and other pleasant weather. Still itchy, he gave up tenure at OU, dabbled in reality TV, and founded the Center for Severe Weather Research (CSWR) back in Boulder ... and still likes observing nice weather."

#### The Henry Stommel Research Medal Arnold L. Gordon

Professor, LDEO, Columbia University, Palisades, New York

For pioneering observational studies that have fundamentally advanced our understanding of Southern Ocean and inter-basin circulation



Arnold L. Gordon, a Columbia University Professor, Department of Earth and Environmental Sciences and at Lamont-Doherty Earth Observatory, Palisades NY, is a fieldgoing physical oceanographer, whose research is directed at the ocean's stratification, circulation and mixing and its place in the Earth's climate system. He investigates a diverse range of regions, from the cold Southern Ocean to the warm tropical seas of the Indian Ocean and Maritime Continent, and their linkage through interocean exchange.

# The Hydrologic Sciences Medal Marc B. Parlange

Provost and Senior Vice President, Monash University, Victoria, Australia

For fundamental contributions to the theory, modeling, and measurement of boundary layer turbulence in hydrometeorology and hydrology



Marc Parlange is the Provost of Monash University and is Professor in the Department of Civil Engineering. His research with his graduate students and colleagues concerns the measurement and simulation of air and water flows over complex terrain, with a focus on how air turbulence and atmospheric dynamics (atmospheric boundary layer flow) influence urban, agricultural and alpine environments.

## The Carl-Gustaf Rossby Research Medal Julia Slingo

Former Chief Scientist, Met Office, Exeter, UK

For cutting-edge research on the physics and dynamics of the tropical atmosphere, leading to significant advances in seamless weather and climate modeling



Dame Julia Slingo is the former chief scientist of the Met Office where she led research across weather and climate. Her research career in climate modelling and tropical variability spanned appointments at ECMWF, NCAR and Reading University. She now has a number of advisory roles, including Special Advisor on Climate to the WMO Secretary General. She is a Fellow of the Royal Society and Foreign Member of the U.S. National Academy of Engineering.

# Honorary Member Jane Lubchenco



- University Distinguished Professor Oregon State University, Corvallis,
- Oregon Jane Lubchenco is a marine ecologist with expertise in the ocean, climate change, and interactions between the environment and human well-being. She works to enable scientists to deliver on their social contract by serving society to the fullest extent. She was Administrator of NOAA (2009-2013) and the first U.S. Science Envoy for the Ocean (2014-2016). Her awards include 23 honorary doctorates and the National Academy of Sciences' and the National Science Foundation's highest honors.

#### Honorary Member

# Julia Slingo

**Former Chief Scientist** Met Office, Exeter, UK

Dame Julia Slingo is the former chief scientist of the Met Office where she led research across weather and climate. Her research career in climate modelling and tropical variability spanned appointments at ECMWF, NCAR and Reading University. She now has a number of advisory roles, including Special Advisor on Climate to the WMO Secretary General. She is a Fellow of the Royal Society and Foreign Member of the U.S. National Academy of Engineering.

# Honorary Member Veerabhadran Ramanathan

Edward Frieman Presidential Professor Scripps Institution of Oceanography, University of California at San Diego, San Diego, California

Ramanathan is the Edward Frieman Presidential Professor in Climate Sustainability. He discovered the greenhouse effect of halocarbons 44 years ago and provided fundamental insights into the feedback effects of clouds and water vapor in climate change. He is an international leader in developing solutions for slowing global warming. He was the science advisor for Pope Francis' delegation to the 2015 Paris climate summit. In 2013, was named the Champion of Earth by the United Nations.

