

G. GSD Science, Service, and Leadership

a. Service on NOAA Boards, Committees, and Projects

Stan Benjamin

- Associate Director, Executive Committee/OAR Representative, for the Joint Center for Satellite Data Assimilation (JCSDA)
- Serves as Lead, Global Modeling Team, NOAA Hurricane Forecast Improvement Project
- Serves as Lead, HIWPP Hydrostatic Global Model Subproject

Ligia Bernardet

- Serves as the Lead of the Global Model Test Bed of the interagency project GSD/NCAR Developmental Testbed Center
- Serves as a member of the NOAA Hurricane Forecast Improvement Project (HFIP) Model Physics and Strategy Team and the Ocean Model Impact Tiger Team
- Serves as a member of the NOAA Next Generation Global Prediction System Software Architecture and Engineering Team, the Overarching System Team, and the Nesting Team

Lidia Cucurull

- Served as NOAA GNSS RO Chief Scientist for the COSMIC-2 Radio Occultation satellite mission and Jason-CS satellite mission
- OAR Technical Liaison to the Joint Center for Satellite Data Assimilation (JCSDA)

Mark Govett

- Serves as a Voting Member of the OpenACC committee representing NOAA on the development of parallelization standards for accelerated computing

Tracy Hansen

- Core team member, Science and Strategic Implementation (SSIP) Development Team for Forecasting a Continuum of Environmental Threats (FACETs)

Craig Hartsough

- Co-editor, The Developmental Testbed Center Newsletter

Paula McCaslin

- Co-editor, The Development Testbed Center Newsletter

Greg Pratt

- Served as Technical Lead for the Geo-Targeted Alerting System (GTAS) project, a prototype implementation of the latest developments in plume modeling, high-resolution weather models, and network enabled operations for NOAA's National Weather Service Program Manager for Meteorological Assimilation Data Ingest System (MADIS) and its implementation at NWS/NCEP, NESDIS/NCEI, and NOAA Integrated Dissemination Program (IDP)

Tom Schlatter

- Served as Chair, Test and Evaluation Working Group, North American Observing System (NAOS) Program, NOAA
- Served as Lead, Data Assimilation Development Team for the Weather Research and Forecasting (WRF) model
- Served on Observations Integrated Planning Team for the National Weather Services' Science and Technology Infusion Plan
- Served as Program Scientist for New England Pilot Project for Improving Air Quality and Surface Temperature Predictions
- Served on Advisory Board of the Developmental Test Center, Boulder, Colorado

Timothy Schneider

- Serves as Project Manager for NOAA's High Impact Weather Prediction Project (HIWPP)

Bonny Strong

- Serves as Lead, HIWPP Test Program Subproject

Sher Schranz

- Served as Subject Matter Expert - NOAA External Fire Weather Research Science Advisory Board

Susan Williams

- Serves on Boulder Outreach and Coordinating Council
- Serves on Boulder Labs Diversity Council as Secretary

Zoltan Toth

- Served as NOAA U.S. The Observing Research and Predictability Experiment (THORPEX) Program Manager
- Served as Co-Chair, Ensemble Prediction and Post-Processing Team for NOAA Forecast Uncertainty program (NFUSE)

Hongli Wang

- Served on the 2015 Review Panel for the National Oceanic and Atmospheric Administration (NOAA) Ernest F. Hollings and Educational Partnership Program (EPP) with Minority Serving Institutions Undergraduate Scholarship Programs

b. Service on International Research Organizations**Lidia Cucurull**

- Chair, Expert Team on New Remote-Sensing Technologies, World Meteorological Organization (WMO) Commission for Instruments and Methods of Observation

Melinda Marquis

- Served as Editor, IPCC Working Group 1 – Physical Science Basis – for the Fourth Assessment Report

Jennifer Mahoney

- Served on the International Civil Aviation Organization (ICAO) World Area Forecast Center committee

William Moninger

- Served as Technical Expert for the World Meteorological Organization (WMO) Aircraft Meteorological Data Relay (AMDAR) Panel

Tom Schlatter

- Served on Scientific Steering Committee, International H2O Project (IHOP)
- Served as Member, Expert Team on Observational Data Requirements and Redesign of the Global Observing System, under the Commission on Basic Systems, World Meteorological Organization (WMO)

Zoltan Toth

- Serves as U.S. Representative, International Core Steering Committee (ICSC) for The Observing Research and Predictability Experiment (THORPEX)
- Served as Co-chair, THORPEX Global Interactive Forecasting System (GIFS) – THORPEX Interactive Grand Global Ensemble (TIGGE) Working Group
- Serves as Secretary for Predictability Section in the Nonlinear Processes in Geosciences Division of the European Geophysical Union
- Served as invited expert – International Aviation Working Group, Boulder, Colorado
- Served three times as invited lecturer – Hungarian Meteorological Service and Hungarian Meteorological Society, Budapest, Hungary
- Served twice as invited lecturer – Korea Meteorological Administration, Seoul, South Korea
- Served as invited lecturer – European Center for Medium Range Forecast, Reading, England
- Served as invited lecturer – Central Weather Bureau, Taipei, Taiwan
- Served as invited lecturer – ETH Zurich University, Zurich, Switzerland
- Served as Deutsche Forschungsgemeinschaft (DFG) Collaborative Research Center Proposal review panel member, Munich, Germany
- Served as JSC/CAS/WMO alternate member

Betsy Weatherhead

- Served as Lead Author – Arctic Climate Impact Assessment
- Served as a member of the World Meteorological Organization – Global Atmospheric Watch Program – Scientific Advisory Group

c. Service on Federal/Interagency/State Committees**Stan Benjamin**

- Served as Lead, Product Development Team for Model Development and Enhancement
- Serves on Federal Aviation Administration (FAA) Aviation Weather Research Program (AWRP)

- Served as Lecturer, Utility Variable-Generation Integration Group (UVIG), previously known as the Utility Wind Integration Group (UWIG)
- Serves as Associate Director, Executive Committee/OAR Representative - Joint Center for Satellite Data Assimilation

Mark Govett

- Serves as a Co-organizer of multiple NCAR Multi-Core Workshops

Eric Hackathorn

- Served on NASA and National Science Foundation Grants Advisory Boards

Steve Koch

- Served as National Research Council Advisor; Lead, Federal Aviation Administration (FAA) Model Development and Enhancement Project Development Team (PDT)
- Served as Co-lead, FAA Turbulence Product Development Team
- Served on NSF's Linked Environments for Atmospheric Discovery (LEAD) External Advisory Panel

Chris MacDermaid

- Served as a member of the National Science Foundation Review Panel

Jennifer Mahoney

- Serves on the AMS Board on Environmental Information Processing Technologies
- Serves on the OAR Evaluations of Community of Practice
- Served on the OAR Weather Ready Nation Committee
- Served on the Joint FAA-NWS Traffic Flow Management Weather Requirements Working Group
- Served on the FAA Weather Evaluation Team
- Served on the Joint Planning and Development Office of Environmental Information Integrated Project Team (IPT)
- Served on the Aviation Weather Integration IPTs for Icing, Turbulence, Convection, Verification (FAA)

Melinda Marquis

- Serves as the OAR Representative to the Resource Assessment and Design Conditions Interagency Working Group

Patricia Miller

- Served on Federal Committee for Integrated Observing Systems (CIOS)
- Served on Federal Highway Administration (FHWA) Clarus Initiative Coordinating Committee
- Served on FHWA Clarus Initiative Coordinating Committee Observation, Quality Control (QC), and Metadata Task Forces
- Served on NOAA Meteorological Assimilation Data Ingest System (MADIS) Transition Team

Thomas Schlatter

- Served on Science Steering Committee, U.S. Weather Research Program
- Served as Lead, Product Development Team for Model Development and Enhancement - Federal Aviation Administration (FAA) Aviation Weather Research Program (AWRP)

- Served as Member, Scientific Steering Committee, Joint Center for Satellite Data Assimilation, operated by NOAA and National Aeronautics and Space Administration (NASA)
- Served as one of the principal authors of Cost and Operational Effectiveness Analysis for the NOAA Profiler Network, a report mandated by the U.S. Senate Appropriations Committee, 2003-2004. This report was instrumental in preserving a network of wind-profiling radars in the central U.S. that contribute toward more accurate weather forecasts, severe weather watches, and warnings. It also laid the groundwork for an upgrade of the network, currently in progress
- Served as member of the National Academy of Sciences Committee on Developing Mesoscale Meteorological Observations to Meet Multiple National Needs

Keith Searight

- Served as a staff mentor for the UCAR Leadership Academy Program

Lynn Sherretz

- Served on NextGen Joint Planning and Development Office
- Served on Weather Working Group Info Tech and Environmental Services Team, Environmental Information Team, and Demonstration Team

Zoltan Toth

- Served as Chair, U.S. The Observing Research and Predictability Experiment (THORPEX) Executive Committee
- Served as Member, U.S. Weather Research Program (USWRP) Prospectus Team
- Served as Review Panel member for NASA ROSES-2014 A.25 research proposal solicitation, entitled Severe Storm Research
- Serves as a NOAA Next Generation Global Prediction System (NGGPS) Statistical Post-Processing Team member
- Served as Invited Expert, International Aviation Working Group, Boulder, CO
- MAPP Proposal Review Panel member, NOAA Climate Program Office
- Served as a member of various NUOPC (National Unified Operational Prediction Capability) panels and working groups
- Serves as Chair, Interim Interagency Weather Research Coordination Committee

Betsy Weatherhead

- Served as a member of the Department of Energy – External Program Review Panel
- Served as a member of the National Science Foundation External Review Panel
- Served as a member of the Department of Energy – Proposal Review Panel

d. Service on Professional Societies and Journals**Curtis Alexander**

- Served as program co-chair for American Meteorological Society (AMS) 2014 Severe Local Storms Conference
- Served on AMS Severe Local Storms Scientific and Technological Activities Commission (STAC) Committee

Dan Birkenheuer

- Served on American Meteorological Society Satellite Meteorology and Oceanography Committee

John Brown

- Served on American Meteorological Society Committee of Mesoscale Processes
- Served on American Meteorological Society Program Committee for Severe Local Storms

Lidia Cucurull

- Serves as a reviewer for *AMS Journal of Atmospheric and Oceanic Technology*.

Brian Etherton

- Serves as an Editor for the *Bulletin of the American Meteorological Society*
- Serves as an Associate Editor for *Weather and Forecasting* (American Meteorological Society)
- Served as Founder of the AMS Symposium on High Performance Computing, under the umbrella of the Environmental Integrated Product Team

Mark Govett

- Serves as a Reviewer for the *Bulletin of the American Meteorological Society*
- Serves as a Reviewer for the *Journal on Parallel Computing*
- Serves as a Reviewer for *Copernicus Publications*

Steven Koch

- Served as Editor, *Weather and Forecasting* (American Meteorological Society)
- Served on American Meteorological Society Committee on Mesoscale Processes
- Served on American Meteorological Society Committee of Judges for Undergraduate Awards
- Served as Co-Chair, 12th American Meteorological Society Conference on Mesoscale Processes
- Served as Co-convenor of American Meteorological Society short course "A Primer on Radar Analysis Techniques used in Mesoscale Meteorology"

Terra Ladwig

- Serves as an editor for the American Meteorological Society's *Monthly Weather Review* publication

Scott Mackaro

- Served on Board of Higher Education, American Meteorological Society

Jennifer Mahoney

- Serves on the AMS Committee on Environmental Information Processing Technologies

Melinda Marquis

- Served as a member and founding chair of the American Meteorological Society Renewable Energy Committee
- Serves as a member and chair of the American Meteorological Society Board on Enterprise Economic Development
- Serves as a member and founding chair of the American Meteorological Society Board on Global Strategies

Joseph Olson

- Serves as a Reviewer for the *Journal Applied Meteorology and Climatology*
- Serves as a Reviewer for the *Quarterly Journal of the Royal Meteorological Society*
- Serves as a Reviewer for *Monthly Weather Review*
- Serves as a Reviewer for Weather and Forecasting

Woody Roberts

- Serves as Chair of the American Meteorological Society Board on Environmental Information Processing Technologies

Thomas Schlatter

- Served as a Councilor for the American Meteorological Society
- Served as Chair, Interim Editorial Board for the *Bulletin of the American Meteorological Society* (BAMS)
- Served on and was Chair of American Meteorological Society Nominating Committee (for President and Council members)
- Served on European Geosciences Union (EGU) Expert Team on Observational Data Requirements and Redesign of the Global Observing System, under the Commission on Basic Systems
- Served as Co-Chair of the 8th, 9th, and 10th Symposia on Integrated Observing and Assimilation Systems for Atmosphere, Ocean and Land Surface in conjunction with AMS Annual Meetings

Lynn Sherretz

- Served on Team Chaired American Meteorological Society Committee on Aviation, Range and Aerospace Meteorology (ARAM)

Ed Szoke

- Serves on American Meteorological Society Committee on Weather Analysis and Forecasting
- Serves as Associate Editor of *Weather and Forecasting* (American Meteorological Society)

Zoltan Toth

- Serves as Editor, *Nonlinear Processes in Geophysics*
- Serves as Editorial Board Member, *Idojaras*
- Served as Vice-President and Secretary for Predictability for the European Geophysical Union

Betsy Weatherhead

- Served on American Geophysical Union Scientific Advisory Group for Ultraviolet (UV) Radiation

e. Service to Cooperative Institutes and Universities**Curtis Alexander**

- Served as an academic tutor for undergraduate students at Penn State University
- Served as Graduate Student Senate Chair, External Affairs Committee, University of Oklahoma
- Served as Chair, Student Affairs Committee, University of Oklahoma, Oklahoma School of Meteorology

Rainer Bleck

- Serves as University of Miami, Florida Adjunct Professor

John Brown

- Serves as an Affiliate Faculty Member on various PhD. Committees: Department of Atmospheric Science, Colorado State University, Ft. Collins, Colorado
- Served with the Department of Aerospace Engineering, University of Colorado, Boulder, Colorado
- Served with the School of Meteorology, University of Oklahoma, Oklahoma
- Served with the Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, Florida

Brian Etherton

- Served as an Adjunct Faculty Member, North Carolina State University
- Served as an Adjunct Faculty Member, University of North Carolina-Charlotte

Mike Fiorino

- Served on dissertation committee, University of Hawaii
- Served on dissertation committee, Colorado State University

Tracy Hansen

- Served in Interdisciplinary Scientific Environmental Technology (ISET) Educational Partnership program
- Served as mentor for four undergraduate and graduate students, and helped find mentors for two more students, all from North Carolina A&T State University
- Served on Master's Degree Thesis Committee for Masters Candidate from North Carolina A&T State University
- Serves as a mentor for University of Colorado Environmental Economics Research Methods course

Chris Harrop

- Served as an Interdisciplinary Scientific Environmental Technology (ISET) mentor to undergraduate student working at GSD for a summer

Craig Hartsough

- Serves as Adjunct Instructor in Astronomy, Front Range Community College, Larimer Campus, Fort Collins, CO
- Serves as WxChallenge Forecasting Contest Team Manager, University of Colorado – Boulder/CIRES

Christina Holt

- Serves as GSD Representative to University of Colorado – Boulder/CIRES Members' Council

Steven Koch

- Serves as an Adjunct Professor, North Carolina State University
- Serves as Technical Monitor, NOAA Educational Partnership Program (EPP) Minority Serving Institution Interdisciplinary Scientific Environmental Technology (ISET) Cooperative Science Center at North Carolina A&T University
- Serves as Associate Faculty Member, Iowa State University

Andrew Loughe

- Served on faculty at University of Colorado – Boulder

Adam Mabrouk

Served as Lecturer, Murray State University, Murray, Kentucky

Paul Madden

- Served as supervisor of University of Colorado – Boulder summer students doing software development at GSD
- Served with University of Colorado – Boulder Faculty/Student Mentor Program

Kevin Manross

- Served as an adjunct faculty member at American Public University Systems teaching meteorology to undergraduate non-majors
- Served as a guest speaker on radar at Metropolitan State University, Denver, CO

Steven Peckham

- Served as Adjunct Professor, Florida State University, Florida
- Served as mentor/advisor for college student's dissertation work

Tom Schlatter

- Served as Lecturer, Colorado School of Mines National Science Academy, Golden, Colorado, for middle school and high school science teachers

John Schneider

- Serves as an Adjunct Faculty member in the University of Colorado – Boulder's Department of Mechanical Engineering

Zoltan Toth

- Served as Guest Lecturer, Department of Meteorology - University of Maryland
- Served as Guest Lecturer, Columbia University, New York
- Served as Guest Lecturer, Howard University, Washington DC

Jeff VanBuskirk

- Serves as Project Management instructor for the Colorado State University – Continuing Education Program

f. Memberships to Professional Societies

Curtis Alexander	- Member, American Meteorological Society
Stan Benjamin	- Fellow, American Meteorological Society
Ligia Bernardet	- Member, American Meteorological Society
Carl Bullock	- Fellow, American Meteorological Society
Lidia Cucurull	- Fellow, American Meteorological Society
Jason English	- Member, American Meteorological Society - Member, American Geophysical Union
Brian Etherton	- Member, AMS Board on Environmental Information Processing Technologies - Member, AMS Committee on Probability and Statistics
Mike Fiorino	- Centennial Fellow, College of Earth and Mineral Sciences, Penn State University
Mark Govett	- Member, Association for Computing Machinery
Ben Green	- Member, American Meteorological Society
Christopher Harrop	- Member, Association for Computing Machinery - Member, IEEE Computer Society
Thomas Henderson	- Member, American Meteorological Society
Ming Hu	- Member, American Meteorological Society
Eric James	- Member, American Meteorological Society
Isidora Jankov	- Member, American Meteorological Society
Hongli Jiang	- Member, American Meteorological Society - Member, American Geophysical Union
Jaymes Kenyon	- Member, American Meteorological Society
Mike Kraus	- Member, American Meteorological Society
Steve Koch	- Fellow, American Meteorological Society
Andrew Kren	- Member, American Meteorological Society

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- Terra Ladwig** – Member, American Meteorological Society
- Jennifer Mahoney** – Member, American Meteorological Society
- Kevin Manross** – Member, American Meteorological Society
– Member, American Geophysical Union
- Joseph Olson** – Member, American Meteorological Society
- John Osborn** – Senior Member, Society for Technical Communication – Rocky Mountain Chapter
– Member, Society for Technical Communication Special Interest Group on Science Writing
- Steven Peckham** – Member, European Geophysical Union
- Tanya Peevey** – Member, American Geophysical Union
– Member, American Meteorological Society
– Member, American Physical Society
– Member, Earth Science Women’s Network
- William Roberts** – Member, American Meteorological Society
- Thomas Schlatter** – Fellow, American Meteorological Society
– Member, AMS Committee on Weather Forecasting and Analysis
- Sher Schranz** – Member, American Association for the Advancement of Science (AAAS)
– Member, American Institute of Aeronautics and Astronautics
- Paul Schultz** – Member, American Meteorological Society
- Tracy Lorraine Smith** – Member, American Meteorological Society
- Jebb Stewart** – Member, American Geophysical Union
- Bonny Strong** – Member, American Meteorological Society
– Member, Project Management Institute
– Member, Institute of Electrical and Electronics Engineers (IEEE)
- Ed Szoke** – Member, American Meteorological Society
– Member, AMS Committee on Weather Analysis and Forecasting
- Craig Tierney** – Member, American Geophysical Union
- Edward Tollerud** – Member, American Meteorological Society
– Member, American Geophysical Union

- Zoltan Toth** – Alternate Member, World Meteorological Organization/Commission for Atmospheric Sciences/Joint Science Committee
– Member, American Meteorological Society
– Member, European Geophysical Union
- Joe Wakefield** – Member, American Meteorological Society
- Yuanfu Xie** – Member, American Meteorological Society

g. Memberships to Cooperative Institute and Universities

- Stan Benjamin** – Fellow, Cooperative Institute for Research in Environmental Sciences
- Dan Birkenheuer** – Fellow, Cooperative Institute for Research in the Atmosphere
- Thomas Schlatter** – Fellow, Cooperative Institute for Research in Environmental Sciences
- John Schneider** – Fellow, Cooperative Institute for Research in the Atmosphere

h. Memberships to Other Technical and Scientific Organizations

- Steve Albers** – Member, Longmont, Colorado Astronomical Society
- Dan Birkenheuer** – Member, AMS Satellite and Oceanography Committee
- Thomas Henderson** – Member, Message Passing Interface Forum
- Scott Nahman** – Member, AFCOM (Association for Data Center Management Professionals)
– Member/Vice President, 7x24 Exchange/Rocky Mountain Chapter (education forum bringing together organizations to promote a better understanding of design, execution, and management issues involved in achieving reliability within all facets of mission critical systems and operations)
- Hilary Peddicord** – Member, National Science Teachers Association
– Member, National Earth Science Teachers Association
– Member, 2014 Review Committee for CLEAN Materials (climate change education compilation for teachers)
- Thomas Schlatter** – Member, National Academy of Sciences Committee on Developing Mesoscale Meteorological Observations to Meet Multiple National Needs
- Jeff VanBuskirk** – Member, Project Management Institute (Project Management Professional [PMP])

i. Invited Talks

Listing is for 2010 to 2015, Current GSD Staff Only

Steve Albers, Invited Seminar Talk, "Weather and All-Sky Imagery - A Comparison of Observed and Local Analysis and Prediction System (LAPS) Simulated Clouds", CIRA, August 27, 2015

Steve Albers, Invited Seminar Talk, "The LAPS Cloud Analysis: Validation with All-sky imagery and development of a variational cloud assimilation", University of North Dakota, October 9, 2014

Curtis Alexander, Webinar/Talk, "Progress and Plans for the Operational High-Resolution Rapid Refresh (HRRR) Model", Mountain Meteorology, Amer. Meteor. Soc., November 19, 2014.

Curtis Alexander, Invited Talk, "Next-Generation Weather Prediction: The revolution in storm forecasting using the High-Resolution Rapid Refresh (HRRR) numerical weather prediction model", NOAA Science Days, June 23, 2014.

Curtis Alexander, Invited Webinar/Talk, "The High-Resolution Rapid Refresh (HRRR): Accessibility of next generation convective-scale forecast guidance from research to operations", American Meteorological Society Board for Operational Government Meteorologists (BOGM), May 7, 2013.

Curtis Alexander, Invited Webinar/Talk, "The High Resolution Rapid Refresh (HRRR): An hourly updating convection permitting forecast system nested in an hourly cycled mesoscale model with multi-scale data assimilation", American Meteorological Society Board for Operational Government Meteorologists (BOGM), June 26, 2012.

Stan Benjamin, Invited Talk, "Advanced global modeling in GSD with FIM and NIM models towards NOAA Next Generation Global Prediction System", Penn State University, State College, PA, October 2015.

Stan Benjamin, Invited Panel Presentation, "Enhancing the model improvement and evaluation process", NWS Science and Operations Officer-Development and Operations Hydrologist (SOO-DOH) Workshop, Boulder, CO, September 15, 2015.

Stan Benjamin, Invited Presentation, "US short-range NWP and assimilation of satellite and radar observations", EUMETSAT Meteorological Satellite Conference, Toulouse, France, September 21, 2015.

Stan Benjamin, Invited Seminar Talk, "Coupled-Model/Assimilation Development at Regional and Global Scales at ESRL", Great Lakes Environmental Research Laboratory, Ann Arbor, MI, May 2015.

Stan Benjamin, Invited Seminar Talks, "FIM global model applications for weather and seasonal forecasting" and "Development of the HRRR/RAP model/assimilation system", Central Weather Bureau, Taipei, Taiwan, February 2015.

Stan Benjamin, Tutorial, "Impact of observation types in the Rapid Refresh", Joint Center for Satellite Data Assimilation Tutorial Workshop, Ft. Collins, CO, August 2015.

Stan Benjamin, Invited Seminar Talk, "ESRL modeling: Global (FIM) and regional (HRRR/RAP models)", Geophysical Fluid Dynamics Laboratory, Princeton, NJ, January 2014.

Stan Benjamin, Invited Talk, "Observation impact experiments including aircraft data with the Rapid Refresh and RUC models", NOAA Aircraft Data Workshop at ARINC, Inc., Annapolis, MD, April 2014.

Stan Benjamin, Invited Talk, "Use of satellite data to improve energy forecast guidance from RAP/HRRR in the US", IGARSS (GNSS Satellite Conference), Quebec City, Canada, June 2014.

Stan Benjamin, Invited Talk, "How Do Weather Models Work?", American Wind Energy Association (AWEA) conference, Las Vegas, NV, December 2013.

Stan Benjamin, Invited Seminar Talk, "The HRRR/RAP models", UK Met Office, Reading, UK, April 2013.

Stan Benjamin, Invited Talk, "Science review on ESRL earth system modeling", CIRES Fellows Meeting, University of Colorado, Boulder, CO, April 2012.

Stan Benjamin, Invited Talk, "FIM model", Joint seminar with Fanglin Yang, NWS/NCEP/EMC, College Park, MD, April 2012.

Stan Benjamin, Invited Talk, "Regional observation impact experiments", 5th WMO Workshop on the Impact of Various Observing Systems on NWP, Sedona, AZ, May 2012.

Stan Benjamin, Invited Seminar Talks, "HRRR/RAP and GSD global modeling", Great Lakes Environmental Research Laboratory, Ann Arbor, MI, October 2011.

Stan Benjamin, Invited Talk, "HRRR/RAP and FIM global modeling", Weather Channel Steamboat Weather Summit, Steamboat Springs, CO, January 2011.

Stan Benjamin, Invited Seminar Talk, "Development of RAP and HRRR and US-Hungary collaboration", Dezxo Devenyi Memorial Conference, Hungarian Meteorological Service, June 2010.

Ligia Bernardet, Invited Talk, "The Numerical Weather Prediction Information Technology Environment (NITE)", European Centre for Medium-Range Weather Prediction (ECMWF), Reading, UK, December 9, 2014.

Ligia Bernardet, Invited Talk, "The Numerical Weather Prediction Information Technology Environment (NITE)", UK Meteorological Office (UK Met Office), Exeter, UK, December 9, 2014.

Ligia Bernardet, Invited Talk, “The role of testbeds in NOAA for transitioning NWP research to operations”, European Centre for Medium-Range Weather Prediction (ECMWF), Reading, UK, November 18, 2013.

Ligia Bernardet, Tutorials, “Hurricane Weather Research and Forecasting (HWRf) Model”. Boulder Colorado, 2010 and 2011; College Park, Maryland, 2014; and Taiwan, 2014.

Christopher Clack, Invited Talk, “The National Energy with Weather System (NEWS) Simulator”, National Wind Technology Center, National Renewable Energy Laboratory, Golden, Colorado, 2015.

Christopher Clack, Invited Talk, “Wind Energy Extraction Optimization and Effects”, Wind Energy Symposium, Harvard University, Cambridge, MA, 2015.

Christopher Clack, Invited Talk, “Can the World’s CO₂ be Stopped Short of a Doubling?”, International Conference on Energy and Meteorology, Boulder, Colorado, 2015.

Christopher Clack, Invited Talk, “Cost-competitive reduction of carbon emissions of up to 80% from the US electric sector by 2030”, Department of Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, PA, 2015.

Christopher Clack, Invited Talk, “Advances in Optimizing Weather Driven Electric Power Systems”, American Geological Union, Renewable Energy Conference, San Francisco, CA, 2014.

Christopher Clack, Invited Talk, “Modeling Solar Irradiance and Wind Speeds to Create an Accurate Resource Assessment for Renewable Energy”, AMS Annual Meeting, Atlanta, GA, 2014.

Christopher Clack, Invited Talk, “A U.S. National Weather Driven Electric System”, Colorado State University, Department of Crops and Soils, 2014.

Christopher Clack, Invited Talks, “Weather Dictated Electricity Generation”, Tyndall Centre for Climate Change Research at University of East Anglia, 2014; Centre for Energy, Environment and Sustainability at University of Sheffield, 2014; Department of Energy and Climate Change, London, 2014; Energy Institute at University College London, 2014; Grantham Institute at Imperial College London, 2014; , Global sustainability Institute at Anglia Ruskin University, 2014; NOAA Sustainable Energy and Atmospheric Sciences Seminar, 2014; DOE National Renewable Energy Laboratory (SEAC), National Energy Simulator, 2013 and 2014; National Renewable Energy Laboratory (Wind Group), National Energy Simulator, 2013. Christopher Clack, Webinar Speaker, “Linear Programming for National Energy Systems”, Stanford University, Stanford, CA, 2013.

Christopher Clack, Invited Talk, “Optimizing a National Energy System”, AMS Washington Forum, Washington, D.C., 2013.

Christopher Clack, Invited Talk, “Does the continental United States have the weather to support large-scale wind and solar deployment?” AMS Annual Meeting, San Diego, CA, 2013.

Christopher Clack, Invited Talk, "How does geographic scale alter the utilization of wind and solar power in the USA?" AGU Meeting, San Francisco, CA, 2012.

Christopher Clack, Invited Talk, "Weather Determined Characteristics of Wind and Solar Energy Generation Systems", North American Wind Energy Academy (NAWEA) meeting, University of Massachusetts, Amherst, MA 2012.

Christopher Clack, Invited Talk, "Weather Determined Characteristics of Wind and Solar Energy Generation Systems", AMS Meeting, New Orleans, LA, 2012.

Christopher Clack, Invited Talk, "Weather Scaling of Wind and Solar Generations Systems", Boulder Weather Day, Boulder, Colorado, 2012.

Lidia Cucurull, Invited Talk, "Global Navigation Satellite System Radio Occultation: Impact Assessment on Global Weather Forecasting", AMS Summer Community Meeting, Boulder, CO, August 2013.

Lidia Cucurull, Invited Talk, "Use of GNSS Radio Occultation data at NOAA", Coordination Group for Meteorological Satellites (CGMS)--Joint Occultations for Probing Atmosphere and Climate (OPAC) and International Radio Occultation Working Group (IROWG), near Graz, Austria, September 2013.

Lidia Cucurull, Invited Talk, "Complementarity of RO and radiance observations in NWP", Joint EUMETSAT-AMS Meteorological Satellite Conference, Vienna, Austria, September 2013.

Lidia Cucurull, Invited Talk, "Use of GPS Radio Occultation Observations to Improve Numerical Weather Prediction Forecast Skill at NOAA", U.S. National Committee of the Union of Radio Scientists International, National Radio Science Meeting, Boulder, CO, January 2014.

Lidia Cucurull, Invited Talk, "GNSS Radio Occultation: From research to long-term sustained operational capabilities with COSMIC-2", AMS Annual Meeting - COSMIC, Atlanta, Georgia, February 2014.

Lidia Cucurull, Tutorial, "GPS Radio Occultation data assimilation", 2105 GSI/EnKF Community Tutorial, Developmental Testbed Center, NCAR, Boulder, Colorado, August 2015.

Lidia Cucurull, Tutorial, "GPS Radio Occultation", JCSDA Summer Colloquium on Satellite Data Assimilation, Fort Collins, CO, July 2015.

Brian Etherton, Invited Talk, "Impact-based Verification", AMS Summer Meeting, Raleigh, North Carolina, August 2015.

Mark Govett, Invited Talk, "Using Fine-Grain Architectures for Weather and Climate Models", 2nd Infrastructure for Earth System Modeling (IS-ENES) Workshop on "HPC for Climate Models", Toulouse, France, February 2013.

Mark Govett, Invited Talk, "Parallelization of the NIM Dynamical Core for GPUs", 1st Infrastructure for Earth System Modeling (IS-ENES) Workshop on Dynamical Cores for Climate Models, Lecce, Italy, December 2011.

Mark Govett, Invited Talk, "Successes and Challenges using GPUs for Weather and Climate Models", NVIDIA GPU Technology Conference, San Jose, CA, March 2011.

Mark Govett, Invited Talk, "Using Graphical Processing Units (GPUs) for Next Generation Weather and Climate Prediction Models", Computing in Atmospheric Sciences Workshop, Annecy, France, September 2009.

Tracy Hansen, Invited Talk, "Python: The Key to Graphical Forecast Editor's Success", American Meteorology Society Conference, New Orleans, LA, January 2012.

Tracy Hansen, Plenary Talk, "Hazard Services", Central Region MIC/HIC meeting, Kansas City, MO, May 2014.

Tracy Hansen, Invited Talk, "Hazard Services: The Backbone of a Weather-Ready Nation", NOAA Science Days, Silver Spring MD, June 2014.

Tracy Hansen, Invited Session Moderator, "Hazard Services", National Hydrologic Program Managers Meeting, Tuscaloosa, AL, May 2015.

Tom Henderson, Invited Talk, "System Software for Atmospheric Models", The Third Global Regional Integrated Model system (GRIMs) Workshop and Tutorial, Seoguipo KAL hotel, Jeju Island, Korea, March 6-8, 2013.

Tom Henderson, Invited Talk, "Software Design for NIM-GRIMs", The Third Global Regional Integrated Model system (GRIMs) Workshop and Tutorial, Seoguipo KAL Hotel, Jeju Island, Korea, March 6-8, 2013.

Jin Lee, Invited Talk, "The three-dimensional finite-volume non-hydrostatic icosahedral model (NIM)", The 2014 KIAPS Int'l Symposium on Global NWP System Modeling, Seoul, Korea, Oct 27-29, 2014.

Jin Lee, Invited Talk, "Recent non-hydrostatic global modeling research and development", Shanghai Typhoon Institute, CMA, Shanghai, China, Oct 29, 2013.

Jin Lee, Invited Talk, "ESRL global model R&D: Non-hydrostatic icosahedral model (NIM)", Atmosphere and Ocean Research Institute, The University of Tokyo, workshop held in LBNL, California, USA, Mar 20-22, 2013.

Jin Lee, Invited Talk, "Global finite-volume non-hydrostatic modeling", Advanced Dynamical Core Modeling for Atmospheric and Oceanic Circulations, International Centre for Theoretical Sciences, India, Feb 19-23, 2013.

Jin Lee, Invited Talk, "The three-dimensional finite-volume non-hydrostatic icosahedral model", Frontiers in Computational Physics 2012, NCAR, Boulder, CO., USA, Dec 17, 2012.

Jin Lee, Invited Talk, "A non-hydrostatic three dimensional finite volume icosahedral model", Isaac Newton Institute for Mathematical Sciences, University of Cambridge, United kingdom, Dec 5, 2012.

Jin Lee, Invited Lecture, "Non-hydrostatic icosahedral model (NIM)", Dynamical Core Model Intercomparison Project (DCMIP), Boulder, CO., USA, Aug 7, 2012.

Jin Lee, Invited Talk, "ESRL global model research and development: A non-hydrostatic icosahedral model (NIM)", Int'l Symposium on the 20th Anniversary of Operational NWP, KMA, Seoul, Korea, Dec 6-7, 2011.

Jin Lee, Invited Lecture, "Geodesic finite-volume numerics", Yonsei University, Seoul, Korea, Dec 5, 2011.

Jin Lee, Invited Lectures, "Geodesic numerics I & II", Summer School in Atmospheric Modeling (SSAM), Boulder, CO., USA, Jul. 19-22, 2010.

Thomas LeFebvre, Invited Talk, "Grid Update Tool", NWS Western Region SOO/DOH Workshop, Boulder, CO, September 24, 2014.

Melinda Marquis, Invited Talk, "Wind Forecast Improvement Project Overview," Utility Wind Integration Group Forecasting Workshop, Tucson, AZ, February, 2014.

Melinda Marquis, Invited Talk, "Climate Change and Renewable Energy," Colorado Renewable Energy Collaboratory Annual Symposium, Ft. Collins, CO, August, 2012.

Melinda Marquis, Invited Talk, "NOAA's Roles in Energy," Utility Wind Integration Group Forecasting Workshop, Tucson, AZ, February, 2012.

Melinda Marquis, Invited Talk, "Wind Forecast Improvement Project," AGU Fall Meeting, San Francisco, December, 2010.

Melinda Marquis, Invited Talk, "Wind Forecast Improvement Project," Utility Wind Integration Group, Quebec, October, 2010.

Hiliary Peddicord, Invited Talk, "NOAA's SOS Explorer and Data Visualization Resources", Climate Science Workshop, NOAA Climate Stewards Education Project, UCAR, Boulder, Colorado, June 2015

Tanya Peevey, Invited Talk, "A case study analysis of the double tropopause and the tropopause inversion layer related to the warm conveyor belt and other midlatitude systems", Swiss Federal Institute of Technology (ETH), Institute for Atmospheric and Climate Science, Zurich, Switzerland, March 2014

Tanya Peevey, Invited Talk, "The relationship between the double tropopause (DT) and the tropopause inversion layer (TIL) in mid-latitudes", Johannes Gutenberg University of Mainz, Institute for Atmospheric Physics, Mainz, German, December 2013

Tanya Peevey, Invited Talk, "Examination of Double Tropopause Characteristics using HIRDLS Observations and Reanalysis Data: Seasonality, Interannual Variability and Duration", Forschungszentrum Julich GmbH, Institute for Energy and Climate Research (IEK-7), Julich, German, April 2011.

Greg Pratt, Invited Poster Presentation, "MADIS a Conduit to Operations", NWS Science and Operations Officer-Development and Operations Hydrologist (SOO-DOH) Workshop, Boulder, CO, September 15, 2015.

Greg Pratt, Invited Presentation, "MADIS the Conduit to Operations, what is it?" 40th Annual meeting of the American Association of State Climatologist, Cape May, NJ, June 23, 2015.

Woody Roberts, Invited Written Presentation, "AWIPS – A Research-to-Operations and Operations-to-Research Success Story", NOAA R2X Summit, Silver Spring, MD, February 4, 2015.

Woody Roberts, Invited Talk, "Application of RUA/RTMA to AWIPS and the Forecaster Decision Support Environment (FDSE)", NOAA Rapidly Updated Analysis Workshop, Boulder, CO, June 4th, 2015.

John P. Schneider & Jebb Stewart, Invited Talk, "Global Visualization Concepts: Science On a Sphere and NOAA Earth Information System", Deep Carbon Observatory Workshop, Smithsonian Institution, Washington, D.C. May 2015.

Timothy Schneider, Invited Talk, "Next Generation Global Prediction System", NOAA Science Days, Washington, D.C. and Silver Spring, MD, October 27-29, 2015.

Jeff S. Smith, Invited Talk, "Weather Ensembles, Big Data, and Analytics", The Interactive Business Analytics Conference (University of Colorado Leeds School of Business), Boulder, Colorado, October 4, 2013.

Jeff S. Smith, Invited Talk, "TerraViz", Unite 2013 (Game Developers Conference), Vancouver, Canada, August 31, 2013.

Jeff S. Smith, Invited Talk, "Moving Weather Model Ensembles To A Geospatial Database For The Aviation Weather Center", UCAR Software Engineering Assembly talk, Boulder, Colorado, April 2, 2013.

Jeff S. Smith, Invited Talk, "Introduction to the NOAA Earth Information System (NEIS)", Gulf of Maine Research Institute Workshop on Data Visualization to Support Ecosystem Based Management, Portland, Maine, February 5-6, 2013

Jeff S. Smith, Invited Talk, "The Quest For The Perfect UI Technology", UCAR Software Engineering Assembly, Boulder, Colorado, February 23, 2012.

Jeff S. Smith, Tutorials, "WRF Domain Wizard and WRF Portal", National Center for Atmospheric Research (NCAR), Boulder, Colorado, January 2010, July 2010, January 2011, July 2011, January 2012, July 2012, January 2013 and July 2013.

Jebb Q. Stewart, Invited Talk, "Exploring interoperability: The advancements and challenges of improving data discovery, access, and visualization of scientific data through the NOAA Earth Information System (NEIS)". Search and Discovery of Scientific Data (IN031), San Francisco, CA, American Geophysical Union, Dec. 9 – 13 2013.

Jebb Q. Stewart, Invited Talk, "Real-time Data Interaction and Visualization using the NOAA Earth Information System (NEIS)", Meteorology Technology World Expo, Brussels, Belgium, October 22nd, 2014.

Zoltan Toth, Invited Presentation, "Earthcube user case on weather-climate interface", EarthCube Science Committee Scope and Vision Workshop, Berkeley, CA, April 25-26, 2015.

Zoltan Toth, Invited Presentation, "The role of NOAA satellites in national and international high impact weather projects", NOAA Satellite Science Week, Boulder, CO, February 23-27, 2015.

Zoltan Toth, Invited Talk, "Challenges in ensemble forecasting", AMS Annual Meeting, Phoenix, AZ, January 5-8, 2015.

Zoltan Toth, Invited Talk, "THORPEX: Taking stock and looking ahead", THORPEX International Core Steering Committee, meeting, Geneva, Switzerland, November 17-18, 2014.

Zoltan Toth, Invited Talk, "Multiscale data assimilation: the Local Analysis and Prediction System", Prediction of Weather and Climate Systems Seamlessly (PROWESS) Workshop, NCMRWF, Noida, India, February 17-19, 2014.

Zoltan Toth, Invited Talk, "THORPEX: Accomplishments and work ahead", 5th THORPEX Asia Science Workshop, Jeju, South Korea, November 4-6, 2013.

Zoltan Toth, Invited Talk, "A quantitative analysis of shadowing chaotic systems", Methods in Chaos Detection and Predictability: Theory and Applications Workshop, Dresden, Germany, June 17-21, 2013.

Zoltan Toth, Invited Talk, "Application of Lyapunov vectors in complex nonlinear systems", Workshop on Exploring Complex Dynamics in High-Dimensional Chaotic Systems: From Weather Forecasting to Oceanic Flows, Max Planck Institute, Dresden, Germany, January 25-29, 2010.

Betsy Weatherhead, Invited Talk, 2014-11-22: Changes in the Atmosphere: Ozone Depletion and Successes. Birla Museum, Hyderabad, India

Betsy Weatherhead, Invited Panelist, 2014-11-18: US India Technical Summit. US Department of State, Delhi, India

Betsy Weatherhead, Invited Talk, 2014-11-24: The Role of Atmospheric Sciences in Renewable Energy. Khan Saab, Hyderabad, India

Betsy Weatherhead, Invited Talk, 2014-11-25: Telangana State Planning - the role of weather forecasts, Hyderabad

Betsy Weatherhead, Invited Talk, 2014-11-20: Detecting Trends in Environmental Data. Presidency University, Kolkata, India.

Betsy Weatherhead, Invited Talk, 2014-11-21: Indigenous Knowledge: Alternative Ways of Knowing. Bisva-Bharti University - Tagore Museum, Shantiketan, India

Betsy Weatherhead, 2014-6-1: Weather Forecast Improvement. NOAA's Science Advisory Board, Washington, District of Columbia

Betsy Weatherhead, E. C.: Detection of Environmental Trends: What can we control? AGU Fall Meeting, San Francisco

Betsy Weatherhead, 2014-5-15: 'American Meteorological Society's Forecast Improvement Group'. GSD Technical Seminar, Boulder, CO

Betsy Weatherhead, 2014-12-9: 'Forecasts Evaluation: Statistical Techniques for Decision Support'. FIQAS, Boulder, CO

Betsy Weatherhead, Invited Talk, 2015-9-16: Forecasts Evaluation: Statistical Techniques for Decision Support, NCEP, College Park, MD.

Betsy Weatherhead, Invited Talk, 2014-11-19: 'Techniques for Identifying Small Advances in Forecasting'. National Centre for Medium Range Weather Forecasting, Delhi, India

Betsy Weatherhead, EGU, 2014-5-2: Improvements in approaches to forecasting and evaluation techniques, Vienna, Austria

Betsy Weatherhead, Invited Talk, American Association for the Advancement of Science Annual Meeting, 1/2012 Indigenous Knowledge

Betsy Weatherhead, Invited Talk, Denver Museum of Nature and Science, 7/2013, Climate Change Science

Betsy Weatherhead, Invited Talk, 11/24/2012, International Youth Leadership, Azerbaijan, Update on Climate Change Science and New Challenges.

Betsy Weatherhead, Invited Talk, London, 2011, House of Lords, Environmental Resources Dinner.

Betsy Weatherhead, Invited Talk, Germany, 2011, Max Planck Institute, Use of Unmanned Aircraft in Support of Environmental Science.

Betsy Weatherhead, Wyoming, 5/2011, Women in Science.

Betsy Weatherhead, 9/15/2015, Washington, DC, US Global Change Research Program, Climate Observing System Simulation Experiments.

Betsy Weatherhead, Invited Talk, 9/30/2015, Boulder, CO National Ecological Observing Network, Evaluating Ecological Change Over Time: Analytical Approaches.

Betsy Weatherhead, 2011-3-28: Advances in techniques to understand linkages between ice quality and seal populations: Arctic Science Summit Week, Seoul, and Republic of Korea

Betsy Weatherhead, 2011-1-25: Solar Energy Forecasting. American Meteorological Society Annual Meeting, Seattle, USA

Betsy Weatherhead, 2011-12-5: Analysis of detailed, sub-cloud field images of Arctic sea ice. AGU Annual Meeting: In Situ and Field-Based Measurements of the Cryosphere I, San Francisco, CA, USA

Betsy Weatherhead, Invited Talk, 2011-11-27: Automation Assistance in Gathering and Analyzing Images of Arctic Ice and Seals. 10th Biennial Conference on the Biology of Marine Mammals, Tampa, FL

Betsy Weatherhead, Convener, 2012-1-22: Town Hall Meeting: Building a Stronger Weather and Climate Enterprise. American Meteorological Society Annual Meeting, New Orleans, LA, USA

Betsy Weatherhead, Invited Talk, 2012-2-16: Indigenous Insights on Climate Change. Annual Meeting of the American Association for the Advancement of Science, Vancouver, Canada

Betsy Weatherhead, 2012-9-1: Designing Monitoring Systems to Detect Changes in Water Vapor. WMO: Global Climate Observing System Reference Upper Air Network, Lindenberg, Germany

Betsy Weatherhead, 2012-1-22: Meeting the Demands for Specialized Weather and Climate Information in a New Business Environment. American Meteorological Society Annual Meeting, New Orleans, LA, USA