



### *Notes from the Head*

I spent the past week in Boulder attending the 2018 UCAR Members Annual Meeting, and then the 2018 AMS/AGU Heads and Chairs Meeting. My head is still swimming with thoughts about the discussions and debates that took place during these two meetings. For example, should we be pursuing program accreditation in atmospheric science? What are the potential roles of Disciplinary Based Education Research (DBER) (... which I admit I don't fully understand)? Should we have a meteorology "field camp" modelled after geology field camp? What should be the requirements for a Bachelor's degree in Atmospheric Science? (and who's familiar with the newest AMS guidelines? and have you seen the WMO guidelines?) I'll be interested to hear your thoughts on these!

Outside of the formal program, I had the wonderful opportunity to meet several DAS alums, including Susan Avery (our program's first Ph.D. recipient!), Wendi Flynn (who was just granted tenure at the University of Northern Colorado), and Redina Herman (who sends her regards from Western Illinois University). I also thoroughly enjoyed my opportunity to dine with two senior scientists with initials "RMR" (i.e., Robert M. Rauber and Roy M. Rasmussen), and participate in their debate about multiplicity in data analysis.

Reflecting on the entirety of the week, I can say that I now have an even deeper appreciation of the reach of DAS, and also of the quality of our program. Indeed, as different audience members voiced their ideas and suggestions, it made me immensely proud to think that the Department of Atmospheric Sciences @ Illinois has already implemented many of these!

## *Publications*

Grassi G et al. (2018), Reconciling global model estimates and country reporting of anthropogenic forest CO<sub>2</sub> sinks, *Nature Climate Change*, <https://doi.org/10.1038/s41558-018-0283-x> - Atul K Jain

Haugen, M. A., Stein, M. L., Moyer, E. J., and Sriver, R. L., Estimating changes in temperature distributions in a large ensemble of climate simulations using quantile regression, 2018, *Journal of Climate*. <https://journals.ametsoc.org/doi/abs/10.1175/JCLI-D-17-0782.1>

Kristovich, D. A., L. Bard, L. Stoecker, and B. Geerts, Influence of Lake Erie on a Lake Ontario lake-effect snow storm, 2018, *J. Appl. Climatol. Meteorol.*, 2019-2033, <https://journals.ametsoc.org/doi/abs/10.1175/JAMC-D-17-0349.1>

Leinonen, J., Lebssock, M. D., Tanelli, S., Sy, O. O., Dolan, B., Chase, R. J., Finlon, J. A., von Lerber, A. and Moisseev, D., Retrieval of snowflake microphysical properties from multifrequency radar observations. September 12 2018, *Atmospheric Measurement Techniques*, <https://www.atmos-meas-tech-discuss.net/amt-2018-73/>

Schlie, E., D. Wuebbles, S. Stevens, R. Trapp, and B. Jewett, 2018: A radar-based analysis of severe hail outbreaks over the contiguous United States for 2000-2011. *International Journal of Climatology*, DOI: 10.1002/joc.5805.

Schwarber, A. K., Smith, S. J., Hartin, C. A., Vega-Westhoff, B. A., and Sriver, R. L., Simple climate model evaluation using fundamental unit tests, 2018, *Earth System Dynamics Discussions*, <https://www.earth-syst-dynam-discuss.net/esd-2018-63/>.

Sharma, A., A.F. Hamlet, H.J.S. Fernando, C.E. Catlett, D.E. Horton, V.R. Kotamarthi, D.A.R. Kristovich, A.I. Packman, J.L. Tank, and D.J. Wuebbles, 2018: The need for an integrated land-lake-atmosphere modeling system, exemplified by North America's Great Lakes region. *Earth's Future*, doi: 10.1029/2018EF000870.

## *Presentations*



Chug, D, "Observed Influence of Vegetation Variability on the Climate of Southeastern South America", Department of Atmospheric Science Colloquium, Champaign-Urbana, IL, 18 Sept 18.

Curtis, J. H., N. Riemer, and M. West, "Investigation of Spatial and Temporal Variations in Aerosol Mixing State Using a Particle-Resolved Regional Aerosol Model", 10th International Aerosol Conference, St Louis, MO, 4 Sept. 2018

Gasparik J., J. Curtis, N. Riemer "Quantifying Errors in CCN Concentration and Aerosol Optical Properties Caused by a Non-Interactive Coarse Mode using a Particle-Resolved Aerosol Model", International Aerosols Conference 2018 (IAC 2018), St. Louis, MO, 4 Sept 2018.

## *Presentations Continued*

Hence, D. "Science By and For All: Broadening pathways into the Atmospheric Sciences", Warren Washington Legacy Symposium, State College, PA, 6 Sept 2018.

Jain, AK., "The Impacts of Various Environmental Factors and Management Strategies on Food Crops in the South and Southeast Asia (SSEA) Region", College of Biosystems Engineering & Food Science, Zhejiang University, Hangzhou, China, 21 Sept 2018.

Miller, D., Z. Wang, "Assessing Seasonal Predictability Sources and Windows of High Predictability in the Climate Forecast System Version 2", International Conference on Subseasonal to Decadal Prediction, Boulder, CO, 18 Sept 2018.

Nesbitt, S., "Orographic Convective Initiation and Upscale Growth", Invited keynote presentation, 4th Symposium on Radar and Hydrometeorological Systems, Córdoba, Argentina, Sep 2018.

Rauber, B., "Generating Cells and Elevated Convection in Winter Storms", University of Wisconsin, Madison, WI, 17 Sept 2018.

Riemer N., Tutorial on "Models for Simulating Atmospheric Aerosols", 10th International Aerosol Conference, St. Louis, MO, 2 Sept - 7 Sept 2018.

Riemer, N., M. Hughes, J. Kodros, J. R. Pierce, M. West, "Machine Learning to Predict the Global Distribution of Aerosol Mixing State Metrics", 10th International Aerosol Conference, St. Louis, MO, 2 Sept - 7 Sept 2018.

Trapp, R. J., "Historical Trends and Future-Climate Projections of Tornado Activity in the United States", Keynote Presentation, Tornado Hazard Wind Assessment and Reduction Symposium, Champaign, IL, 26 Sept -27 Sept 2018, <https://publish.illinois.edu/thwarts2018/>

Wuebbles, D., Radio interview on climate, KTOO radio, Juneau, AL, 6 Sept 2018.

Wuebbles, D., "Assessing Climate Change", Invited Egan Lecture, University of Alaska Southeast, Juneau, AL, 6 Sept 2018.

Wuebbles, D., "Assessing the Science of Climate Change", Danville Area Community College, Danville, IL, 19 Sept 2018.

Wuebbles, D., Radio Interview on the Sky Day Project, WBEZ Radio, Chicago, IL, 6 Sept 2018.

Wuebbles, D., Talk at Middle school, Juneau, AK, 6 Sept 2018.

Wuebbles, D., Talk on Climate Change, UIUC Anthropology Class, Champaign-Urbana, IL, 18 Sept 2018.

Yao, Y., N. Riemer, M. Dawson, "Sensitivity of Sulfate In-cloud Chemistry and CCN Activation to pH Variability and Mixing State Using a Particle Resolved Model", 10th International Aerosol Conference, St. Louis, MO, 2 Sept - 7 Sept 2018.

## *Activities and Awards*



Jeff Frame was interviewed and published in the News-Gazette, September 23, 2018 [Just Askin' Predicting Seasonal Weather](#)

Deanna Hence was part of the NASA Review Panel on Sept 26-28

Brian Jewett was interviewed by NCSA, [NCSA Article](#)

Douglas Miller served as a rapporteur for a session at the International Conference on Subseasonal to Decadal Prediction. His summary of the session will be used for a publication, where he will be a co-author.

Bob Rauber was awarded a 5 year NASA

grant, in collaboration with scientists around the country, to study Northeast U.S. Winter cyclones. The project includes flights with the NASA P-3 and WB-57 aircraft. Field research will be carried out in 3 winters (2020-2022)

Bob Rauber, as an AMS Publication Commissioner, attended the AMS Council meeting to report on the activities of the AMS Commission on Publications in the calendar year 2017, and plans for 2018 and the future.

Nicole Riemer attended the Council meeting of the AMS at the AMS Headquarters in Boston, MA on Sep 27-28.

Don Wuebbles met with Lieutenant Governor of Alaska, September 7, 2018

Don Wuebbles met with Mayor of Anchorage, Alaska, Sept. 13, 2018

Don Wuebbles was named the winner of the Bert Bolin Global Environmental Change Award by the American Geophysical Union

Don Wuebbles led the workshop on the development of the Illinois Center for Urban Resilience and Environmental Sustainability, Champaign, August 20-21.

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*Photos from SESE Beginning of School Year BBQ*



**ATMOSPHERIC SCIENCES**  
School of Earth, Society, and Environment

## Announcements



### Upcoming Events

- ◆ October. Seminars
  - ◆ 10.16 Frank Lombardo
  - ◆ 10.23 Michael Bell
  - ◆ 10.30 Joe Finlon
- ◆ MSCAR Conference  
October 27-28

### Manuscript Submission

Prof. Ryan Sriver is co-editor of a special issue of the international journal *Water*: "Extreme Floods and Droughts under Future Climate Scenarios". We invite multi-disciplinary manuscripts with a focus on projected hydroclimatic extremes and their impacts. Go to [https://www.mdpi.com/journal/water/special\\_issues/floods\\_droughts](https://www.mdpi.com/journal/water/special_issues/floods_droughts) or contact Ryan for more information.

### Math-Stat-Climate Seminar Speaker Invitation

Prof. Ryan Sriver is co-organizing a 2019 joint seminar series on math-stat-climate connections, in coordination with Prof. Vera Mikyoung Hu (Math) and Prof. Bo Li (Statistics). Contact Ryan if you are interested in speaking or if you have recommendations.

### AMS Registration

The 99th AMS Annual Meeting will be held in Phoenix, AZ on January 6-10, 2019. Don't

forget to register before it's too late. <https://annual.ametsoc.org/index.cfm/2019/>

### MSCAR Conference

The 2<sup>nd</sup> Midwestern Student Conference on Atmospheric Research will be held at the University of Illinois on October 27-28, 2018. For more information please visit. <https://www.atmos.illinois.edu/cms/One.aspx?portalId=127458&pageId=622549>

### CACTI field Campaign

The CACTI field campaign, which is the Department of Energy Atmospheric Radiation Measurement component of RELAMPAGO-CACTI, is spinning up operations this month. To learn more, see this interview of Prof. Steve Nesbitt: <https://twitter.com/armnewsteam/status/1047543596235116544> For photos, go to: <https://twitter.com/armnewsteam/status/1046862166303825922>

### Call for Briefing Submissions

Remember to submit your publications, presentations, activities, and awards for the month of October <https://forms.illinois.edu/sec/8969322>