DEPARTMENT NEWS

EAPS COLLOQUIA

Thijs Heus
“How Does Organization of Warm Cumulus Clouds Modify the Aerosol Climate Feedback?”
Cleveland State University
Thursday, January 12
3:30 PM
HAMP 1252

PUBLICATIONS

PROFESSOR WEST ATTENDS ISMR MEETING

Terry West attended the 30th annual meeting of the Indiana Society of Mining and Reclamation (ISMR) meeting in Evansville, IN on December 5-6, 2016. At the meeting he coauthored a poster paper with graduate student Victoria Leffel (holds BS degree from EAPS), entitled “City of West Lafayette, Combined Sewer Overflow Relief Interceptor Project”. Dr. West serves on the Executive Committee of ISMR, as the University representative, that plans the annual December meeting for coal mining personnel. Over 100 participants attended the short courses and technical sessions sponsored by ISMR.

BIRTH ANNOUNCEMENTS

Fallon L. McQuern & Robert D. McQuern IV had a son, Colin Dale McQuern, on Dec. 12, 2016. He weighed 7 lbs. 1 oz. and was 20.5 inches long.

Professors Robin Tanamachi and Daniel Dawson had a son, Paul Masao Dawson, on Jan. 1, 2017.

STUDENT NEWS

HAZARDOUS WEATHER TESTBED RESEARCH ASSOCIATE POSITION

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) is currently looking for a Research Associate to provide scientific and meteorological expertise, and technical support for annual NOAA/Hazardous Weather Testbed (HWT) Spring Forecasting Experiments (SFEs), and real-time, year-round experimental prediction systems.

To apply for the position, please forward your resume, cover letter and list of three references to:

Tracy Reinke, Executive Director, Finance and Operations
University of Oklahoma CIMMS
120 David L. Boren Blvd., Suite 2100
Norman, OK 73072-7304
treinke@ou.edu
Attn: HWT

Please see attachment for more details.

NASA EARTH AND SPACE SCIENCE FELLOWSHIP (NESSF) PROGRAM

NASA announces a call for graduate fellowship proposals to the NASA Earth and Space Science Fellowship (NESSF) program for the 2017-2018 academic year. This call for fellowship proposals solicits applications from accredited U.S. universities on behalf of individuals pursuing Master of Science (M.Sc.) or Doctoral (Ph.D.) degrees in Earth and space sciences, or related disciplines. The purpose of NESSF is to ensure continued training of a highly qualified workforce in disciplines needed to achieve NASA’s scientific goals. Awards resulting from this competitive selection will be made in the form of training grants to the respective universities.

The deadline for NEW applications is February 1, 2017, and the deadline for RENEWAL applications is March 15, 2017. The NESSF call for proposals and submission instructions are located at the NESSF 17 solicitation index page at http://nspires.nasa.gov/ - click on “Solicitations” then click on “Open Solicitations” then select the “NESSF17” announcement. Also refer to “Program Specific Questions” and “Frequently Asked Questions” listed under “Other Documents” on the NESSF17 solicitation index page.

All proposals must be submitted in electronic format only through the NASA NSPIRES system. The faculty
advisor has an active role in the submission of the fellowship proposal. To use the NSPIRES system, the faculty advisor, the student, and the university must all register. Extended instructions on how to submit an electronic proposal package are posted on the NESSF 17 solicitation index page listed above. You can register in NSPIRES at http://nspires.nasaprs.com/.

For further information contact Claire Macaulay, Program Administrator for NESSF Earth Science Research, Telephone: (202) 358-0151, Email: claire.i.macaulay@nasa.gov or Dolores Holland, Program Administrator for NESSF Heliophysics Research, Planetary Science Research, and Astrophysics Research, Telephone: (202) 358-0734, E-mail: hq-nessf-space@nasa.gov.

CIMMS RESEARCH ASSOCIATE POSITION

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma (OU) is currently looking for a Research Associate to provide leadership, satellite expertise, and meteorological support for the GOES-R Proving Ground effort based at the NOAA/NWS Storm Prediction Center (SPC). The SPC is located at the National Weather Center (NWC) in Norman, OK, a highly collaborative environment containing a number of NOAA and OU organizations, including the National Severe Storms Laboratory, NWS Warning Decision Training Division, NWS Forecast Office, OU School of Meteorology, and OU Center for Analysis and Prediction of Storms.

This project will include activities focused to maximize the diagnostic and forecast value of geostationary satellite data and products. The incumbent will interact with NWS operational forecasters to prepare them for new satellite dependent products that will become operationally available after the launch of GOES-R.

Please see attached flier for more information.

http://www.eaps.purdue.edu/
STEM EDUCATION CONFERENCE AT PURDUE
1/12/17
9:00 AM - 4:30 PM

Purdue will be hosting the 2nd Annual Indiana STEM Education Conference at Purdue on 1/12/17 from 9:00 AM to 4:30 PM. Proposals are due by 10/15/16. Email to carlacjohnson@purdue.edu. You will be notified of the decision on your proposal by 11/4/16.

Presenters will need to register for the conference at: https://goo.gl/5KbfKP

2017 COLLEGIATE LEADERS IN ENVIRONMENTAL HEALTH (CLEH) SUMMER PROGRAM

The Centers for Disease Control and Prevention (CDC), National Center for Environmental Health (NCEH) and the Agency for Toxic Substances and Disease Registry (ATSDR) in Atlanta, Georgia, are accepting applications for their Collegiate Leaders in Environmental Health (CLEH) Summer Program.

Over the course of the summer, fellows will be exposed to a broad overview of environmental public health issues at the federal level. Fellows will participate in a comprehensive program including environmental health project assignments, interaction with federal officials and scientists, and visits to important environmental health sites in and around Atlanta. Other activities include "brown-bag" lunches with CDC staff, as well as attending lectures from prominent environmental health leaders in the Atlanta area. In addition, interns will be able to attend the many seminars offered by CDC during the summer. For examples of past CLEH internship projects, please review at https://www.cdc.gov/nceh/summerinternships/experience.htm.

Qualifications:

• Must be a currently enrolled full-time undergraduate who will be a junior or senior in Fall 2017. Students graduating in spring 2017 are not eligible.

• Minimum cumulative GPA of 3.0 on a 4.0 scale

• Academic major or demonstrated coursework concentration in environmental studies; physical, biological, chemical and/or environmental health to also include emergency preparedness, environmental justice, sustainability, and/or global health environmental studies; environmental, physical, biological chemical and/or social sciences; applicants not majoring in one of these areas may be considered.

Ideal candidates would have extra-curricular activities or volunteer work that is related to the field of environmental health or the environment, including holding positions in these organizations or activities. Undergraduate students must show a dedication to environmental and/or health issues via their coursework or extra-curricular activities.

For complete eligibility information and instructions to apply, please visit: https://www.zintellect.com/Posting/details/2773; ORISE Posting Number CDC-NCEH-2017-0020. For any additional information, please contact Marilyn Duffoo, myr4@cdc.gov. Application deadline is January 27, 2017.

2017 GRADUATE ENVIRONMENTAL HEALTH (GEH) SUMMER PROGRAM

The Centers for Disease Control and Prevention (CDC), National Center for Environmental Health (NCEH) and the Agency for Toxic Substances and Disease Registry (ATSDR) in Atlanta, Georgia, are accepting applications for their Graduate Environmental Health (GEH) Summer Program.

Over the course of the summer, students will be engaged in environmental health projects. They will be exposed to a broad overview of environmental health issues at the Federal level. Students will have the opportunity to participate in a number of activities during the internship to include reading and helping to guide weekly journal club discussions, attending and participating in weekly subject matter expert (SME) briefings, attending and participating in weekly field trip activities, preparing and presenting on assigned environmental health projects, participating in professional development trainings including career development, communication, leadership and

http://www.eaps.purdue.edu/
inquiry and analysis. Students will be matched with a project supervisor based on their experience and skill set. Students will also have the opportunity to meet and collaborate with seasoned environmental health professionals and scientists during this internship. For examples of past GEH internship projects, please review at [https://www.cdc.gov/nceh/summerinternships/experience.htm](https://www.cdc.gov/nceh/summerinternships/experience.htm)

Qualifications:

- Graduate student (enrolled in a Masters or Doctoral program) with an academic major or demonstrated concentration in environmental studies, environment, public health, physical, biological, chemical, medical, and/or social sciences.
- Students enrolled in a doctoral-level clinical degree program (such as MD/DD, DVM, DDS, Pharm D) will also be considered.
- Students who will graduate in spring 2017 are not eligible.
- Minimum cumulative GPA of 3.0 on a 4.0 scale.

Ideal candidates would have extra-curricular activities or volunteer work that is related to the field of environmental health or the environment, including holding positions of leadership in these organizations or activities. Students should have a passion for the environment and an eagerness to learn about the environment's link to human health.

For complete eligibility information and instructions to apply, please visit: [https://www.zintellect.com/Posting/details/2775; ORISE Posting Number: CDC-NCEH-2017-0021](https://www.zintellect.com/Posting/details/2775; ORISE Posting Number: CDC-NCEH-2017-0021). For any additional information, please contact Marilyn Duffoo, myr4@cdc.gov. Application deadline [February 3, 2017](https://www.zintellect.com/Posting/details/2775).

---

**FUN NEWS**

Five-year old science whiz teaches Ellen about the International Space Station and Mercury (skip to about 1:00 for relevant content) - [http://ellentube.com/videos/0-0w717kr5/](http://ellentube.com/videos/0-0w717kr5/)

---

**BIRTHDAYS**

Matthew Huber  
Jan. 10
IMPORTANT NOTICE ABOUT THIS NEWSLETTER

This newsletter is used as the primary information source for current and upcoming events, announcements, awards, grant opportunities, and other happenings in our department and around campus. Active links to additional information will be provided as needed. Individual email announcements will no longer be sent unless the content is time-sensitive. We will continue to include our publications, presentations and other recent news items as well.

Those using paper copies of the newsletter should go to our newsletter archive on the EAPS website at http://www.eaps.purdue.edu/news/newsletters.html and Click on News to access active links as needed. Material for inclusion in the newsletter should be submitted to Logan Judy (ljudy@purdue.edu) by 5:00pm on Thursday of each week for inclusion in the Monday issue.

If it is in the newsletter, we assume you know about it and no other reminders are needed. For answers to common technology questions and the latest updates from the EAPS Technology Support staff, please visit: http://www.eaps.purdue.edu/resources/information_technology/index.htm

Also, as an additional resource for information about departmental events, seminars, etc., see our departmental calendar at http://www.EAPS.purdue.edu/events-calendar.html
How Does Organization of Warm Cumulus Clouds Modify the Aerosol Climate Feedback?

Thijs Heus
Cleveland State University

Cloud-aerosol interactions are one of the largest uncertainties in our understanding of climate: An increased amount of aerosol changes the radiative properties of the cloud, for instance due to higher reflectivity of smaller droplets, but also due to delayed rain formation, and potentially longer lived clouds. However, rain formation is also part of a feedback loop that impacts the formation and organization of clouds. How this particular feedback works together with the cloud-aerosol interaction is less clear. We study this phenomenon using a series of high resolution, large domain numerical simulations. With a few notable exceptions, we find that the behavior of the cloud field is predominantly governed by the large scale thermodynamic state of the atmosphere, and less so by the microphysical details.
CIMMS Research Associate at SPC (Satellite Meteorologist)

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at The University of Oklahoma (OU) is currently looking for a Research Associate to provide leadership, satellite expertise, and meteorological support for the GOES-R Proving Ground effort based at the NOAA/NWS Storm Prediction Center (SPC). The SPC is located at the National Weather Center (NWC) in Norman, OK, a highly collaborative environment containing a number of NOAA and OU organizations, including the National Severe Storms Laboratory, NWS Warning Decision Training Division, NWS Forecast Office, OU School of Meteorology, and OU Center for Analysis and Prediction of Storms. This project will include activities focused to maximize the diagnostic and forecast value of geostationary satellite data and products. The incumbent will interact with NWS operational forecasters to prepare them for new satellite dependent products that will become operationally available after the launch of GOES-R.

The principal duties of this position are:
1. Serve as a “Satellite Liaison” at the SPC and the Hazardous Weather Testbed (HWT), leading GOES-R Proving Ground efforts on satellite based hazardous weather products and demonstrating the unique and complementary value of satellite information to forecasters;
2. Develop and/or document satellite dependent forecast and analysis tools and training focused on the specific needs of hazardous weather forecasters; up to 20% of time may be used to conduct applied research on GOES-R products applicable to improving severe weather forecasting, nowcasting, or warning decision-making;
3. Test and validate proposed new satellite dependent products and decision aids for forecasters with an emphasis on exploring the value of advanced satellite products for detection and short-term prediction of convective storms and associated hazards;
4. Serve as “implementation expert” for selected planned GOES-R products and their proxies;
5. Participate in HWT experiments including the annual Spring Forecast Experiment serving as the focal point for satellite centered activities;
6. Provide satellite expertise to the logistical support of any field experiments headquartered out of the National Weather Center;
7. Bridge satellite-related activities between the Warn-on-Forecast program and the NWS and NESDIS.
8. Represent the GOES-R effort within the HWT by contributing to formal scientific publications, and/or attending off-site conferences, symposia and hazardous weather related outreach events;
9. Develop synergy and shared accomplishments with the NOAA Testbeds and the GOES-R Proving Grounds collocated with the Aviation Weather Center in Kansas City, MO, the NESDIS Satellite Analysis Branch-Weather Prediction Center-Ocean Prediction Center in College Park, MD, and the NWS OCONUS Regional Headquarters in Anchorage, AK and Honolulu, HI.
10. Enhance collaborations with the Cooperative Institute for Meteorological Satellite Studies/University of Wisconsin, Cooperative Institute for Research into the Atmosphere/Colorado State University, and the NASA/Short-term Prediction Research and Prediction Center to test, evaluate, and/or provide feedback on new satellite-based tools and products related to convective storm and fire weather applications.
11. Perform related duties as assigned.

The minimum qualifications for the position are:
1. A Master’s or PhD Degree in Meteorology, Atmospheric Science or related area and at least one year experience in operational meteorology or applied research; additional post-graduate education may be substituted for experience.
2. Emphasis will be placed on applicants with considerable experience in satellite meteorology, and its application to hazardous weather prediction, including deep convection, high resolution numerical models, and ensemble prediction systems.
Applicants should identify their demonstrated expertise with Satellite Meteorology and any of the following areas: Severe Thunderstorms; Numerical Modeling; Ensemble Systems and Probabilistic Forecasting; Warning Decision Making; and Fire Weather Meteorology. Excellent oral and written communication skills are highly desired and a strong ability to work in a collaborative team environment is needed for the position. Please describe experience with Linux (or UNIX) operating systems, software skills including programming and scripting languages, web page development, graphic design or illustration, and AWIPS2/N-AWIPS workstations.

Normal working hours will be observed except for occasional irregular hours during data collection, warning/forecast experiments or workshops conducted at remote sites. The incumbent will receive training and gain expertise in warning and forecasting decision-making.

The new hire will be employed by CIMMS with technical oversight provided by SPC management. The incumbent works under general supervision but is expected to work independently and determine action to be taken in handling all but unusual situations. This is a non-supervisory position, although the incumbent is expected to serve as a leader of scientific or technical experiments, groups, or teams; therefore strong teamwork and leadership skills are necessary. The salary for this position is competitive and will be based on experience, skills, and knowledge. Information on University benefits may be found at http://hr.ou.edu/Employees/New-Employees-at-OU/OU-Benefits-Overview.

To apply for the position, please forward your resume, cover letter and list of three references to:

Tracy Reinke, Executive Director, Finance and Operations
University of Oklahoma CIMMS
120 David L. Boren Blvd., Suite 2100
Norman, OK 73072-7304
treinke@ou.edu
ATTN: GOES-R

The University of Oklahoma is an Equal Opportunity/Affirmative Action employer.
Hazardous Weather Testbed Research Associate

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) at the University of Oklahoma (OU) is currently looking for a Research Associate to provide scientific and meteorological expertise, and technical support for annual NOAA/Hazardous Weather Testbed (HWT) Spring Forecasting Experiments (SFEs), and real-time, year-round experimental prediction systems. A key focus will include development of web-based visualization tools to support/enhance SFE activities and post-experiment analysis and verification of convection-allowing ensembles used in the SFEs. The position will be based at the National Severe Storms Laboratory (NSSL) in Norman, OK within the National Weather Center, a high collaborative forecasting, research, and academic environment containing a number of NOAA and OU organizations. As this unique position will serve the interests of both the NSSL and Storm Prediction Center (SPC), the incumbent will work directly with research scientists at NSSL and development meteorologists/operational forecasters at SPC.

The principal duties of this position are:
1. Enhance and develop web-based visualization of real-time ensemble data for NOAA/HWT SFEs, as well as real-time, year-round systems like the Storm Scale Ensemble of Opportunity (SSEO) and NSSL-WRF.
2. Conduct post-experiment analyses/verification of convection-allowing ensembles from Community Leveraged Unified Ensemble (CLUE) experiments, subjective model evaluations, and other experimental and operational systems used in the SFE.
3. Support, develop, and enhance SFE core activities including acceleration of new tools from research to operations, inspiring new initiatives for operationally relevant research, and identifying and documenting sensitivities and performance of state-of-the-art convection-allowing models and ensembles.
4. As needed, represent CIMMS/NSSL/SPC by contributing to scientific publications and attending off-site conferences, workshops, symposia and hazardous-weather-related outreach events.

The minimum qualifications for the position are:
1. A Master’s Degree in Meteorology, Atmospheric Science, or related area.
2. Emphasis will be place on applicants with knowledge and experience in web design and model visualization, as well as knowledge in severe storms meteorology, numerical weather prediction models/ensemble systems including convection-allowing models and application of statistical techniques for forecast verification.

Excellent oral and written communication and public speaking skills are highly desired, as well as proficiency in Python, and a strong understanding of JavaScript, PHP, CSS stylesheets, and how to implement dynamic data visualizations through D3. Applicants should identify experience in web development, graphic design/visualization, programming and scripting languages, numerical weather prediction, and Linux (Unix) environments including AWIPS/N-AWIPS.

Normal working hours will be observed except for occasional irregular hours during data collection, warning/forecast experiments or workshops conducted at remote sites. CIMMS staff will provide general supervision with technical oversight provided by NSSL and SPC scientific staff and management. The incumbent works under general supervision, but is expected to work independently and determine action to be taken in handling all but unusual situations.

The beginning salary is commensurate with educational background and experience, with OU benefits. Information on OU benefits can be found at http://hr.ou.edu/Employees/New-Employees-at-OU/OU-Benefits-Overview.

To apply for the position, please forward your resume, cover letter and list of three references to:

Tracy Reinke, Executive Director, Finance and Operations
University of Oklahoma CIMMS
120 David L. Boren Blvd., Suite 2100
Norman, OK 73072-7304
treinke@ou.edu
Attn: HWT

The University of Oklahoma is an Equal Opportunity/Affirmative Action employer.
The Cuban Geological Society (SCG) is pleased to invite scientists, professionals, technicians and university students of Geology, Geophysics, Mining and related Geosciences, to participate in the VII Earth Sciences Convention, and Exhibition of Products, New Technologies and Services, to be held at the International Conference Center of Havana, Cuba on April 3-7, 2017.

The convention welcomes presentations about Cuba, the Caribbean and other regions or in general about the geology, geophysics and mining experiences in the search and management of natural resources, including minerals (metals, industrial), water, oil and gas, construction, earthquake research and other geohazards, education of geosciences; as well as any other related to the sustainable exploitation of natural resources.

We invite professional societies, institutions and non-government organizations to organize workshops, round tables and meetings during the Convention.

Dr. Manuel A. Iturralde Vinient
President of the Cuban Geological Society

www.scg.cu; www.cubacienciasdelatierra.com
geociencias@mnhnc.inf.cu