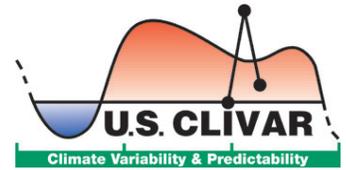


# March 2013 U.S. CLIVAR Newsgram



Please forward to interested colleagues. To manage your subscription to this newsgram, visit: [www.usclivar.org/contact/get-involved](http://www.usclivar.org/contact/get-involved). To include an announcement in our next issue, email Jennifer Mays: [jmays@usclivar.org](mailto:jmays@usclivar.org). Follow us on Twitter: [twitter.com/USCLIVAR](https://twitter.com/USCLIVAR).

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## **Calendar of Upcoming Events**

also see: <http://usclivar.org/calendar>

[AMS Washington Forum “The Value and Sustainability of the Weather, Water and Climate Enterprise”](#)

April 2-4, 2013  
Washington, DC

[NOAA 2013 Satellite Conference for Direct Readout, GOES/POES, AND GOES-R/JPSS Users](#)

April 8-12, 2013  
NOAA/NCWCP, College Park, MD

[4th WGNE Workshop on Systematic Errors in Weather and Climate Models](#)

April 15-19, 2013  
Exeter, UK

[WCRP GEWEX International Satellite Cloud Climatology Project at 30](#)

April 22-25, 2013  
New York, NY

[SPARC DynVar & SNAP Workshop](#)

April 22-26, 2013  
Reading, UK

[11th Annual CPASW Climate Prediction Applications Science Workshop](#)

April 23-25, 2013  
Logan, UT

[Water Cycle Missions for the Next Decade Workshop](#)

April 29-30, 2013  
BWI Airport Embassy Suites, Baltimore, MD

[AMS 12th Conference on Polar Meteorology and Oceanography](#)

April 29 - May 2, 2013  
Seattle, WA

[Ocean Gateways Past and Present: Significance for Ocean Circulation and Terrestrial Climate](#)

May 5-7, 2013  
Jerusalem, Israel

20th Session of the CLIVAR Scientific Steering Group (by invitation)  
May 6-8, 2013  
Kiel, Germany

[WCRP Seasonal to Decadal Prediction Workshop](#)

May 13-16, 2013  
Toulouse, France

[2013 AGU Meeting of the Americas](#)

May 14-17, 2013  
Cancun, Mexico

[34th Session of the WCRP Joint Scientific Committee](#) (by invitation)

May 27-31, 2013  
Brasilia, Brazil

[AGU Chapman Conference: Communicating Climate Science: A Historic Look to the Future](#)

June 8-13, 2013  
Granby, Colorado

[AMS 19th Conference on Atmospheric and Oceanic Fluid Dynamics](#)

June 17-21, 2013  
Newport, RI

[IMBER Open Science Conference “Future Oceans”](#)

June 23-27, 2013  
Bergen, Norway

[Second China-U.S. Symposium on Meteorology: Severe Weather and Regional Climate Variability and Predictability](#)

June 24-28, 2013  
Huanghai Hotel, Qingdao, China

[12th International Meeting on Statistical Climatology](#)

June 24-28, 2013  
Jeju, Korea

## **Upcoming U.S. CLIVAR Events**

[U.S. CLIVAR International Workshop - Understanding the Response of Greenland's Marine Terminating Glaciers to Oceanic and Atmospheric Forcing](#)

Beverly, MA

June 4-7, 2013

Registration/Abstract Submission **now closed**.

[U.S. CLIVAR Hurricane Workshop](#)

Geophysical Fluid Dynamics Lab, Princeton, NJ

June 5-7, 2013

Registration/Abstract Submission opens in **April**.

[U.S. CLIVAR Summit](#) (by invitation)

Lowes, Annapolis, MD

July 9-11, 2013

[U.S. AMOC/U.K. RAPID International Science Meeting 'AMOC Variability: Dynamics and Impacts'](#)

Hilton Baltimore, Baltimore, MD

July 16-19, 2013

Registration/Abstract Submission **now open**.

**Abstract Submission deadline extended: April 1.**

[U.S. CLIVAR Extremes Workshop - Analyses, Dynamics, and Modeling of Large Scale Meteorological Patterns Associated with Extreme Temperature and Precipitation Events](#)

Lawrence Berkeley National Lab, Berkeley, CA

August 20-22, 2013

Registration/Abstract Submission **now open**.

## **Announcements**

### **1. U.S. CLIVAR ENSO Diversity Workshop Report Released**

The [U.S. CLIVAR Working Group on ENSO Diversity](#) held a 2.5 day workshop last month in Boulder, CO. The workshop gave scientists the opportunity to present on a wide range of topics related to the current state of the knowledge in ENSO research. The effectiveness of instrumental and paleo proxy data in characterizing ENSO diversity was a key topic. Presentations and discussion also focused on the ability of climate models to simulate ENSO diversity. Whether to view ENSO diversity as two distinct types, or a continuum with notable outliers one of the overarching themes of discussion.

Members of the ENSO Diversity Working Group, led by Antonietta Capotondi and Ben Kirtman, produced a workshop report that synthesized the presentations and discussion from the workshop, and defined outstanding issues and future research priorities. Some of those priorities include understanding the causes of ENSO diversity regime changes, precursors and triggers of ENSO events. The importance of continued and enhanced ocean observations was identified as an urgent priority in order to continue essential monitoring and prediction efforts. Increased understanding of teleconnections and impacts were also identified as priorities as well as further assessment of climate model performance. Presentations from the workshop, along with the workshop report, can be accessed at the [ENSO Diversity Workshop website](#).

### **2. U.S. Global Change Research Program Releases "Our Changing Planet" for 2013**

The [U.S. Global Change Research Program](#) (USGCRP) delivered its annual report to Congress for fiscal year 2013: "Our Changing Planet." The report highlights recent activities by 13 Federal agencies to strengthen our scientific understanding of global changes—including climate change—the threats and opportunities they present, and how they are likely to evolve over time. In addition, the Our Changing Planet report showcases tangible results of work carried out by USGCRP agencies, including, for example, some of the most detailed, data-rich maps of Alaskan permafrost ever generated; the most precise map ever produced of carbon stored in Earth's tropical forests; critical information about the number and magnitude of extreme weather events in the United States; and updated maps that help gardeners and growers plan for

harvesting seasons. The report is available for download at the [USGCRP Resource Library](#).

### **3. CLIVAR Announces Early Career Scientists Network**

CLIVAR has created a new network to offer more opportunities for early career scientists. Undergraduates, graduate students, and scientists less than 5 years post PhD are eligible to join. Besides a chance to network with the international climate community, there are options to get involved with CLIVAR meetings and workshops. There will also be a focus to broadcast relevant information on jobs, grants, and fellowships listings. This is a great time to get involved at the ground level of the network. For more information, visit the [CLIVAR ECS Network website](#).

### **4. AIRS Version 6 Level 2 Data Now Available from NASA GES DISC**

The Aqua Atmospheric Infrared Sounder (AIRS) Project and the Goddard Earth Sciences Data and Information Services Center (GES DISC) are pleased to announce the availability of AIRS Version 6 Level 2 data. AIRS Version 6 Level 2 data represent a significant improvement over AIRS Version 5 Level 2 products in terms of greater stability, yield, and quality. Several algorithmic improvements have been made by the AIRS Project in conjunction with the AIRS Science Team. More information on and access to AIRS Version 6 data is [available here](#). Many of the improvement are listed here:

- Improved soundings of Tropospheric and Sea Surface Temperatures, day and night.
- Improvements are larger with increasing cloud cover.
- Improved retrievals of surface spectral emissivity, day and night.
- Most of the spurious temperature bias trend seen in earlier versions has been removed.
- Substantially Improved retrieval yield (number of soundings accepted for output) for Climate studies.
- AIRS-Only retrievals with comparable accuracy to AIRS/AMSU retrievals.
- More realistic hemispheric seasonal variability and global distribution of Carbon Monoxide.

### **5. NOAA NCEP Releases NMME April - October Forecasts**

The National Multi-Model Ensemble (NMME) forecasts for April 2013 through October 2013 are now available at the [NOAA/NWS NCEP CPC website](#). Both NMME and International MME (IMME) forecasts can be accessed from this page. Forecasts are presented for the following fields:

- 2-meter surface temperature (global and North America)
- Precipitation rate (global and North America)
- Sea-surface temperature (global and Nino3.4-region)

Mean spatial anomaly forecasts and probability forecasts can both be accessed from the homepage. This month, the NMME is comprised of six models: NCEP CFSv2, CMC CanCM3 and CanCM4, NCAR CCSM3.0, GFDL CM2.1, and NASA.

### **6. NOAA NODC releases AVHRR Pathfinder Version 5.2 for 2011**

The Advanced Very High Resolution Radiometer (AVHRR) Pathfinder Version 5.2 (PFV52) data set was computed using an entirely modernized system, based on SeaDAS and incorporating several key changes over the older Pathfinder V5.0 and V5.1 datasets. PFV52 is viewed as a significant step forward in preparation for the future Version 6 (PFV6) data set (no release has yet been established for PFV6).

Changes in PFV52 include the use of an entirely new land mask, a modified grid, and the inclusion of sea ice and wind speed ancillary data to support the use of the SST data. Importantly, the new PFV52 data

are provided in Network Common Data Form (netCDF-4) (classic model, with internal compression and chunking) and are nearly 100% compliant with the Group for High-Resolution Sea Surface Temperature (GHR SST) Data Specification Version 2.0 for L3C products. These data deviate from that standard only in that the sses\_bias, sses\_standard\_deviation, and sst\_dtime variables are empty. Data for 1981-2011 are available. Visit the [NOAA NODC Pathfinder website](#) for more information.

## **7. AGU 2013 Honor Nominations Deadline Extended**

There is still time to submit a nomination for AGU's Honor awards. Numerous awards are available for nomination such as the Excellence in Geophysical Education Award and the Edward A. Flinn III Award for 'unselfish cooperation in research'. In most cases, candidates must have an active AGU membership status at the time of submission. The submission deadline has been extended until March 31. See the [AGU 2013 Honors Program website](#) for more information.

## **Announcement of Opportunity**

### **1. NOPP & ONR Announce Funding Opportunity: Advancing Air-Ocean-Land-Ice Global Coupled Prediction on Emerging Computational Architectures**

The National Oceanographic Partnership Program (NOPP) Office is pleased to announce a new funding opportunity in partnership with the Office of Naval Research (ONR) titled: [Advancing Air-Ocean-Land-Ice Global Coupled Prediction on Emerging Computational Architectures](#). Funding associated with this Broad Agency Announcement (BAA) is approximately \$1.25M per year over three years. ONR and its partnering agencies expect to make approximately 4-8 awards, ranging from \$100,000-\$500,000, for 1-3 year durations. Proposals are due by **2:00 p.m. EST on April 12, 2013**.

A significantly improved capability to simulate and predict the coupled global air-ocean-wave-land-ice system at eddy-resolving spatial scales in a computationally and operationally efficient and massively parallel architecture towards real-time, predictions is desired. Responders to this announcement should propose work in collaboration with the Naval Research Laboratory (NRL), DOE, NOAA, and/or NCAR laboratories; and should consider an interdisciplinary team of computer scientists, oceanographic and meteorological scientists, numerical methods experts, and software engineers. More information on this funding opportunity can be within the [BAA document here](#).

## **Meetings and Workshops**

### **1. [NSF EarthCube Modeling Workshop for the Geosciences](#)**

**Boulder, CO**

**April 22-23, 2013**

Across the geosciences, models of the solid and fluid dynamics and physical processes of the earth and space systems advance our scientific understanding of complex environments and our ability to translate our science into useful societal applications. As EarthCube seeks to develop a data and knowledge management system to transform the geosciences, the input of groups and individuals whom have built-up their own infrastructure and communities around modeling efforts will be critical. While the scientific problems addressed by the broad community of geosciences "modelers" are varied, the strong commonalities in the computational challenges and requirements of many of these communities should be exploited

to meet these challenges and be a central goal of EarthCube.

This workshop seeks to document the experiences and expertise of well-defined modeling communities within the Geosciences that have, over time, developed their own community, infrastructure and resources, assess the needs and readiness of modelers in related geosciences disciplines who do not currently have access to similar resources or community organizations, and provide well defined use cases and a list of functional requirements that can inform the development of EarthCube. Registration is open until full and that participants may attend virtually via NSF-sponsored virtual access.

## **2. JPL/GEWEX/CLIVAR Workshop: Using GRACE Data for Water Cycle Analysis & Climate Modeling** **Pasadena, California** **July 15-17, 2013**

The workshop, organized by NASA JPL's Center for Climate Sciences and GRACE Team, with support from the Global Energy and Water Cycle Experiment (GEWEX), and CLIVAR will take place at the Jet Propulsion Laboratory California Institute of Technology in Pasadena, CA.

The workshop will focus on the application of GRACE observations to large-scale water cycle processes and land-water storage, ocean circulation and sea level changes, with a specific emphasis on model development and data assimilation. Our goal is to spark a dialogue with the modeling community to explore how the great potential of GRACE data can best be utilized to monitor and simulate a changing water cycle. Please register by **May 1, 2013**, as attendance is limited. [More details and the agenda can be found here](#). For further details on the GRACE/GEWEX/CLIVAR workshop, please contact [Felix Landerer](#) or [Carmen Boening](#).

## **3. AGU Chapman Conference on Seasonal to Interannual Hydroclimate Forecasts & Water Management** **Portland, OR** **July 28-31, 2013**

The primary objective of this conference is to convene climate scientists, hydrologists, forecasting agencies, water utilities, reservoir operators and water management agencies together for understanding the challenges and opportunities in developing hydroclimate forecasts that are relevant to water resources management. The abstract submission deadline is **March 27, 2013**.

Over four days, the participants will focus on various issues related to hydroclimate forecasts and water management by addressing the following science questions:

- What are the key sources of uncertainties that challenge development of skillful hydroclimate forecasts at daily, seasonal and interannual time scales?
- How best do we reduce the uncertainty and improve reliability in downscaling large-scale climate information for developing regional hydroclimate forecasts?
- What are the key challenges in using probabilistic streamflow information in operational water resource management models and decision tools?
- What are the limitations in applying streamflow forecasts for real-time applications?
- How can we bridge the gaps between forecast producers (agencies, research institutions) and forecast consumers (water resource managers, operational agencies) for improving forecast applications in water management?

#### **4. OCB U.S. Ocean Acidification Principal Investigators' Meeting**

**Washington, DC**

**September 18-20 2013**

The second U.S. Ocean Acidification Principal Investigators' Meeting will be held in Washington, DC at Gallaudet University's Kellogg Conference Center on September 18-20, 2013. This three-day meeting will bring together the U.S. OA research community to assess the state of OA science nationally and to identify knowledge gaps and opportunities for collaborations that will accelerate OA research in the future.

This meeting offers an opportunity for the scientific community to help shape U.S. national OA research efforts as they develop. In addition to poster sessions to showcase scientific results, meeting activities include numerous panel, plenary, and breakout discussions designed to explore how current U.S. OA research and organizational support fit together, and to identify where greater synergies can be encouraged. Meeting attendees will take an active role in considering the current state of the science and planning future opportunities for the research community as a whole.

The organizing committee has laid out five primary goals for the meeting:

1. Strengthen scientific collaboration and minimize duplication of efforts
2. Synthesize current state of knowledge, identify major uncertainties, and discuss the way forward
3. Promote effective data management and sharing
4. Explore how to apply results of OA studies to the world outside the lab
5. Identify outstanding research questions

#### **5. ICYESS 2013: Understanding and Interpreting Uncertainty**

**Hamburg, Germany**

**September 22-25, 2013**

Interdisciplinary Conference of Young Earth System Scientists (ICYESS) is an international and interdisciplinary conference, organized by and for young scientists (Master's and PhD students as well as young PostDocs). The conference brings together scientists from various disciplines including natural, social and political sciences, economics and sustainability research.

The main purpose of the conference is to promote interdisciplinary exchange and mutual understanding between the diversity of research fields in Earth system sciences. It will enable you to present and discuss your own research in an interactive and innovative way, and to expand your networks at an early career stage. The common theme of this conference is Understanding and Interpreting Uncertainty. This means that we invite you to join ICYESS to present your research and to jointly reflect on how we deal with uncertainty in our work and disciplines. Submission deadline: **June 1, 2013**. There are no participation fees for ICYESS 2013.

#### **6. OCEANS '13 MTS/IEEE**

**San Diego, CA**

**September 23-26, 2013**

The OCEANS conference is jointly sponsored by the Institute of Electrical and Electronics Engineers Oceanic Engineering Society (IEEE/OES) and the Marine Technology Society (MTS). This international conference is a major forum for scientists, engineers and those with an interest in the oceans to gather and exchange their knowledge and ideas regarding the future of the world's oceans. Topics of interest to

the CLIVAR community include Ocean Observation Technologies; Ocean Data Visualization, Modeling, and Information Management; and Marine Environment, oceanography, and meteorology. Abstracts submission is now open and closes on **May 3, 2013**.

#### 7. [WCRP/ACPC Africa Climate Conference 2013](#)

**Arusha, Tanzania,**

**October 15-18, 2013**

The [Africa Climate Conference 2013](#) (ACC-2013) aims to address new frontiers of knowledge in the African Climate system and narrow the communication gap currently existing between African decision-makers and climate scientists in order to develop a coordinated collaborative research strategy. Concrete pan-African and multidisciplinary climate research program proposals and a concerted climate research effort, hosted across African climate research hubs, are anticipated from this major climate Conference for Africa.

Some themes of interest to the CLIVAR community include:

- Understanding and prediction of SST variability with particular attention given to frontier research on ocean basins less studied than the tropical Pacific ENSO region (e.g. Indian Ocean, Tropical Atlantic) that have comparable impacts on African rainfall.
- Understanding and representation of teleconnections in models to enhance forecast performance and interpretation.
- Improved understanding and modelling of MJO and its impact on the temporal distribution of African seasonal rainfall, including rains onset and cessation, is a key research frontier.

All interested researchers and practitioners working on African climate are invited to submit an abstract of 500-1000 words, presenting their research findings on the relevant Climate Research frontiers identified for this Conference, by visiting the [Call for Abstracts](#). The abstract deadline is **May 31, 2013**. Efforts are currently underway to secure funding for scientists and researchers to attend the ACC-2013, particularly young Africa-based researchers and women scientists.

#### 8. [2013 UNOLS Chief Scientist Training Cruise Opportunity](#)

**Narragansett, RI**

**October 16-25, 2013**

The 2013 University-National Oceanographic Laboratory System (UNOLS) Chief Scientist Training Cruise will instruct early career marine scientists, including PhD students, on how to effectively plan for, acquire, utilize and report on time at sea for multi-disciplinary research and education. The full program will take place from October 16-25, 2013, beginning and ending at the University of Rhode Island Marine Operation Facilities in Narragansett, Rhode Island, and will include a seven-day cruise on the R/V Endeavor to at sea locations in the Middle Atlantic Bight. The deadline to apply is **April 1, 2013**. For more information, visit the [UNOLS website here](#).

#### 9. [AGU 2013 Fall Meeting](#)

**San Francisco, CA**

**December 9-13, 2013**

The session proposal website is now open for the AGU 2013 Fall Meeting. You must be a current AGU member to submit a session proposal. The submission deadline is **April 19, 2013**. Proposals are reviewed by a Program Committee for approval. Visit the [AGU 2013 Fall Meeting website](#) for more submission guidelines and to view the list of currently proposed sessions.

## **Position Announcements**

### **1. Director (Laboratory Fellow)**

#### **Joint Global Change Research Institute, College Park, Maryland**

Pacific Northwest National Laboratory (PNNL) is seeking a Director for the Joint Global Change Research Institute (JGCRI) in College Park, Maryland. This is an extraordinary opportunity to lead an interdisciplinary, world-class research team in addressing issues at the energy-environment interface. The Institute houses a multi-disciplinary team of about fifty full time staff, students and international visitors dedicated to understanding the problems of global change and their potential solutions. Scientific staff at the Institute bring decades of experience and expertise to bear in science, technology, economics, and policy.

JGCRI, a vibrant intellectual hub, is one of only a handful of institutions around the world that have built and maintained the capacity to do truly interdisciplinary integrated assessment modeling. One of the strengths of the Institute is a network of domestic and international collaborators that encourages the development of global and regional understanding of global change problems and their potential solutions. In addition, the Joint Institute focuses on developing dialogues around global change issues, across disciplines and national boundaries, and among diverse socio-economic stakeholders.

Specific research focus areas at the Institute include:

- Integrated Assessment Modeling
- Technology Strategies to Address Climate Change
- Natural Resource Modeling and Assessment
- Vulnerability and Adaptation Studies
- Local and Global Environmental Mitigation Measures–Policy Development and Testing.

Minimum Requirements:

- Minimum Education Requirement - PhD 7+ years experience (distinguished personal achievements)
- Technical Expertise - Widely recognized international/national authority. Technical contributions recognized as having a very substantial impact on advancing the current state of knowledge and understanding in scientific or technical disciplines.
- Level of Responsibility - Nationally recognized Laboratory authority in a broad specialization or a narrow, intensely specialized field.
- Breadth of Technical Knowledge - Innovates new technologies that define scientific and technical directions/frontiers.

Qualifications: The successful candidate will have an international reputation in climate change and/or energy-environment issues, and demonstrate broad understanding of the multidisciplinary challenges associated with global change research.

He/she will have a deep understanding of and engagement with one or more national research programs. Demonstrated experience in building new programs and working with multi-disciplinary teams is essential. The successful candidate will have the opportunity to maintain an active research program and contribute to the intellectual directions and accomplishments of the Institute staff and their collaborators. An important element of the Director's responsibilities is representing the Institute and their research activities in a variety of scientific and programmatic forums, taking a leadership role in elevating the visibility and reputation of the Institute.

PhD in Environmental Sciences, Engineering, Atmospheric Sciences, Biogeochemical Sciences, or related fields and ten or more years of experience involving increasing responsibility in global change and/or en-

ergy-environment research. The successful candidate must have a demonstrated track record of scientific contributions to national and international endeavors in climate change research (such as the IPCC, NAS committees, National Assessments), strong leadership qualities, and the ability to build new research programs, working collaboratively with others across a broad spectrum of disciplines to accomplish strategic goals. For more information, [visit the PNNL website](#) and search for Job ID: 302210.

## **2. Senior Scientist Group Leader Position Oak Ridge National Laboratory**

The Computer Science and Mathematics Division in the Computing and Computational Sciences Directorate at the Oak Ridge National Laboratory (ORNL) is seeking a senior scientist to lead and continue the development of a world-class research group in computational Earth sciences. In addition to carrying out research, the successful candidate will provide technical leadership and management of the Computational Earth Sciences Group, create partnerships with other similar research groups to carry out program goals, and actively seek Department of Energy and other external funding. The candidate will represent the Computer Science and Mathematics Division, the Oak Ridge National Laboratory, and the Department of Energy in professional activities, will prepare annual performance evaluations of group staff, and will oversee the group budget.

The Computational Earth Science Group at ORNL is committed to leadership in the development and analysis of global high-resolution Earth system models with an emphasis on (1) numerical methods that are efficient, scalable to millions of cores, highly accurate and include explicit quantification of uncertainty; (2) model driven collection, analytics, and evaluation of climate related data; and (3) global biogeochemical and hydrological cycles. The Computational Earth Sciences Group Leader will work with the Oak Ridge Climate Change Science Institute which has been created to develop and exploit an Earth System Modeling enterprise that will apply the scientific capabilities of our staff and our leadership-class computational facilities to project future climates and provide the basis for assessing likely impacts, potential adaptations to changes in the environment, and the effectiveness of various mitigation options. For more information, visit <http://jobs.ornl.gov/> and click "View External Positions" and select Position Category: "Science - Computer/Computational Science/IT" and Position Level: "Management".

## **3. Associate/Full Professor in Integrated Modeling of Hydroclimate Systems University of California, Davis (UCD) and Lawrence Berkeley National Laboratory (LBNL)**

The Department of Land, Air and Water Resources (LAWR) in the College of Agricultural and Environmental Sciences, University of California, Davis, and Lawrence Berkeley National Laboratory (LBNL) invite outstanding scholars to submit an application for Associate Professor in Integrated Modeling of Hydroclimate Systems. The incumbent will also hold a Faculty (Sr) Scientist appointment at LBNL. This will be a 9-month academic year appointment supported equally by UCD and LBNL. The ideal candidate would link hydrologic and atmospheric process at regional to global scales toward a more unified science of hydroclimatology for better understanding interplay between climate change, hydrologic processes and ecological systems.

The candidate's research is expected to complement existing UC Davis and LBNL research activities in watershed sciences, integrated subsurface/surface hydrologic modeling, large-scale and climate dynamics, mesoscale modeling, and Earth system modeling, among others. Potential areas of research may include predicting and understanding changes in precipitation and the hydrologic cycle, climate trends, and collaborations to understand the propagation and cycling of water through individual watersheds in the California Sierra Nevada.

A PhD in hydrologic science, atmospheric science, or a closely related discipline is required. Applicants for this position will be required to teach a hydroclimate modeling course at the graduate level. Supervision of graduate students, student advising, curricular development, participation in outreach programs, and university service are expected.

For additional information about the position, and to submit application materials, please visit <http://recruit.ucdavis.edu>. Please include: (1) curriculum vitae; (2) description of current and projected research; (3) summary of teaching interests and experience; and (4) up to three publications, all in PDF format. In addition, applicants should provide the names and email addresses of three references.

Open until filled, but all application materials, including letters of recommendation, must be received by **May 10, 2013** to assure full consideration. UC Davis is an affirmative action/equal employment opportunity employer and is dedicated to recruiting a diverse faculty community. We welcome all qualified applicants to apply, including women, minorities, veterans, and individuals with disabilities.

#### **4. Post-Doctoral Research Position on Aerosol Effects on Convective Clouds and Climate Oxford University, UK**

Oxford University is looking for an outstanding researcher in the dynamic Climate Processes Group within the sub-Department of Atmospheric, Oceanic and Planetary Physics (AOPP). The post is available immediately for a fixed-term period of up to 3½ years.

This position is part of the European Research Council funded project, Aerosol Effects on Convective Clouds and Climate (ACCLAIM), with the objective to consistently combine global models, remote sensing and cloud resolving models to advance our understanding on the physical processes underlying aerosol-convection interactions. The funding provided by the ERC allows supporting a focused team within one research group, fostering exchange across methodologies.

The successful applicant will guide the convection parameterization development in the group and is expected to develop original research strategies. The results should be presented at national and international meetings as well as published in high-impact publications. This post offers the possibility to co-advise a doctoral student and potentially other teaching opportunities.

Applicants should have a doctorate in atmospheric physics or a related field and ideally a strong background in convective processes/fluid dynamics, experience in global modelling and potentially aerosol-cloud interactions. As the overall projects bridges global climate models, cloud resolving modelling, remote sensing and process studies this post would suit a candidate with interests beyond an already established demonstrated track record in convection.

Only applications received by 12.00 midday on Monday, **April 15, 2013** can be considered. You will be required to upload a supporting statement, CV and supply names and addresses of two referees as part of your [online application](#), (vacancy ID: 107178.) In addition, candidates should arrange for the letters of reference to be sent in by the closing date. Please direct informal inquiries to [Dr Philip Stier](#).

#### **5. Post-Doctoral Positions in Climate Modelling Department of Meteorology and the Bolin Centre for Climate Research, Stockholm University**

The Department of Meteorology, Stockholm University, conducts research and education in an international environment within four main areas: Atmospheric Physics, Dynamic Meteorology, Physical Oceanography and Chemical Meteorology. In all these areas there is a strong focus on the climate and on processes important for the climate and its development.

Project/job description: Candidates are invited to propose 2-year projects under the subject heading Climate Modelling to be conducted within the Bolin Centre for Climate Research. The proposed projects should be oriented towards climate model development, model evaluation, and/or model applications and be under one of the following headings: (1) atmosphere and/or ocean circulation, variability, and decadal predictability, (2) representing processes at unresolved scales, (3) paleoclimate modelling, and (4) Arctic climate change. The Bolin Centre for Climate Research is involved in the development and application of EC-Earth. A minimum of two projects will be granted. The successful candidates, two or more, will be placed at the Department of Meteorology.

Qualifications: The applicant should have a PhD in Meteorology, Atmospheric Science, Oceanography, or other relevant field of science. The applicant should have excellent English language skills, both oral and written communication. Terms of employment: Each position is full time for a maximum of 2 years. The preferred starting date is June 1 or as soon as possible. See [this website](#) for more information; reference number SU FV-0697-13. Deadline for applications: **April 20, 2013**. Information: For more information, contact [Professor Gunilla Svensson](#), Bolin Centre Climate Model Coordinator, or Head of Department [Michael Tjernström](#).

## **6. Post-Doctoral Position in Paleoclimate Modelling**

### **Department of Physical Geography and Quaternary Geology, Stockholm University**

The Department of Physical Geography and Quaternary Geology main research areas are: Climate, environment and landscape; Landscape analysis and geomatics; Glacier and polar environments; and Land and water resources. As part of the multidisciplinary Bolin Centre for Climate Research modelling initiative, the Department of Physical Geography and Quaternary Geology contributes actively through paleoclimate modelling. The paleoclimate modelling module has three primary objectives: to study the behavior of climate models for different past boundary conditions; to provide information to aid an analysis of climate signals recorded in proxy data; and to test hypotheses concerning the functional behavior of the climate system under a range of environmental conditions.

The primary duty of the postdoctoral candidate is to investigate the mechanism of global and regional climate change and variability in the past, with an emphasis on the last few millennia, through numerical experiments and model-data comparisons. Model experiments will, in particular, employ the EC-Earth model system, for which the Bolin Centre for Climate Research is involved in its development and application.

Required qualifications: The successful candidate has a PhD in Meteorology, Atmospheric Science, Physical Geography, Physical Oceanography or other closely related field of science. Experience from climate modeling using ocean-atmosphere coupled models is required. Experience of paleoclimate modelling and use of the EC-Earth model is considered advantageous. The applicant should have excellent English language skills, in both oral and written communication. The applicant needs to have received a PhD in the past 3 years (from application deadline). In case of special circumstances an older degree may be accepted. Such circumstances may be sickness, parental leave, medical work, commission of trust within trade unions, or similar circumstances. Terms of employment: Two-year full time post doc position. Envisioned starting date is June 1, 2013 (negotiable).

See [this website](#) for application instructions. Ref. No. SU FV-0799-13. Deadline for applications: **April 20, 2013**. For further information contact: [Dr. Qiong Zhang](#), Tel: +46 8 16 4876, or [Dr. Anders Moberg](#).

## 7. Employment and Research Opportunities PCIC with the Canadian Sea Ice and Snow Evolution Network

The Canadian Sea Ice and Snow Evolution (CanSISE) Network is a newly funded 5-year collaborative partnership between researchers from eight Canadian universities (Toronto, York, McGill, Victoria, Guelph, Waterloo, UBC, UNBC) and three partner organizations (the Climate Research Division of Environment Canada, the Canadian Ice Service, and the Pacific Climate Impacts Consortium).

To a unique degree, CanSISE will bring together University and government researchers with climate modelling and observational expertise. The CanSISE Network seeks to advance seasonal to multidecadal prediction of Arctic sea ice and snow in Canada's sub-Arctic, alpine, and seasonally snow covered regions.

It will also quantify and exploit, for prediction purposes, the role that Northern Hemisphere snow and sea ice processes play in climate variability and change. CanSISE activities are organized into three theme areas, including a) seasonal to multi-decadal snow and sea-ice prediction and projection, b) attributing change in snow and sea-ice, and understanding its impacts, and c) improving our understanding of snow and sea ice processes and climate interactions.

CanSISE funding over the period 2013-2018 will provide opportunities for up to 10 undergraduate internships, 12 graduate studentships at the PhD level, 20 postdoctoral fellowships, 2 research associates and a research assistant. Recruiting for these positions has begun, and will be ongoing throughout the life of the network. For more information about the network, and network employment opportunities at all levels, please visit the [CanSISE website](#).

Three opportunities are available at PCIC. See the following position descriptions for more detailed information:

- \* [Post-Doctoral Researcher](#)
- \* [Doctoral Studentship](#)
- \* [Research Associate](#)

## 8. Ocean and Climate Model Manager British Antarctic Survey

Based in the Polar Oceans program, the postholder will join a team investigating ocean and ice variability in the Southern and Arctic oceans and its impacts on the Earth System. The postholder will manage all ocean modelling infrastructure and climate model output, contributing to scientific publications as appropriate. This is an open-ended post with flexible hours, and we are willing to consider part-time or flexible working patterns for an appropriate candidate. Full details can be [found online here](#).

The closing date for applications is **April 12, 2013**. Any questions about this posting can be addressed to [Paul Holland, British Antarctic Survey](#), +44 (0)1223 221444.