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## **January 2009 U.S. CLIVAR News-gram**

### **Table of Contents**

#### **i – Calendar of Upcoming Events**

#### **Research Opportunities**

1. NSF IGERT - Integrative Graduate Education and Research Traineeship Program (IGERT)
2. The National Science Foundation announces the Partnerships for International Research Education program

#### **Position Announcements**

3. Faculty Position The Florida State University, Extreme Events in Climate
4. Research Scientist in Ocean Remote Sensing at NASA's Jet Propulsion Lab
5. Executive Director, IPCC Working Group II Technical Support Unit
6. Post-doctoral position at the Department of Geophysics, Universidad de Chile

#### **Meetings and Workshops**

7. AMS Short Course: Modern Era Retrospective-analysis for Research and Applications (MERRA)
8. IAMAS/IAPSO Joint Symposium
9. European Geosciences Union meeting
10. GEWEX 6<sup>th</sup> International Scientific Conference on the Global Energy and Water Cycle
11. 41st International Liège Colloquium on Ocean Dynamics
12. Regional Modeling Workshop
13. North American Carbon Program All-Investigators Meeting

#### **ANNOUNCEMENTS**

- **Eighth Workshop on Decadal Climate Variability: Decadal Nowcasting, Forecasting, and Societal Impacts Postponed**
- **JASON-2 Data Now Available**

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#### **CALENDAR of UPCOMING EVENTS**

(for more information-[www.usclivar.org/calendar.html](http://www.usclivar.org/calendar.html))

#### **February 2009**

2-6: AMMA-Ocean/TACE/PIRATA meeting (Toulouse, France)

9-13: Conference on Southern Hemisphere Meteorology and Oceanography (Australia)

#### **March 2009**

25-27: 3<sup>rd</sup> ARGO Science Workshop (Hangzhou, China)

24-27: NOAA Climate Predictions Applications Workshop (Norman, OK)

25-26: Workshop on El Nino and Climate Change (Perth, Australia)

#### **Research Opportunities**

##### **1. NSF IGERT - Integrative Graduate Education and Research Traineeship Program (IGERT)**

[http://www.nsf.gov/pubs/2009/nsf09519/nsf09519.htm?govDel=USNSF\\_25](http://www.nsf.gov/pubs/2009/nsf09519/nsf09519.htm?govDel=USNSF_25)

Preliminary Proposal Due Date(s) (required): March 13, 2009

Full Proposal Deadline(s): September 14, 2009

Proposals submitted to the IGERT program must describe integrative, research-based, graduate education and training activities in emerging areas of science and engineering. The IGERT project should be organized around an interdisciplinary theme that is based on transformative interdisciplinary research in science/technology/engineering/mathematical sciences. The proposed IGERT should involve a diverse group of faculty members and other investigators with appropriate expertise in research and teaching. The interdisciplinary theme provides a framework for integrating research and education and for promoting collaborative efforts within and across departments and institutions. Students should gain the breadth of skills, strengths, and understanding to work in an interdisciplinary environment while being well grounded with depth of knowledge in a major field. As an opportunity for faculty to experiment with new approaches to graduate education, the IGERT project should provide students with experience relevant to both academic and nonacademic careers. This experience may involve such activities as internships and mentoring in industrial, national laboratory, academic, or other settings. Globalization of research and career opportunities provides students with an international perspective. This perspective may be gained through programs within the institution, or through strongly integrated, collaborative research experiences and/or fieldwork at foreign institutions and sites. The graduate experience should contribute to the professional and personal development of the students and equip them to understand and integrate scientific, technical, business, social, ethical, policy and global issues to confront the challenging problems of the future.

## **2. The National Science Foundation announces the Partnerships for International Research Education program**

Preliminary Proposal Due Date: 26 February 2009 Full Proposal Due Date (by invitation only): 4 August 2009

For further information, please go to:

[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=12819](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12819)

Program Synopsis:

The Partnerships for International Research and Education (PIRE) program seeks to catalyze a higher level of international engagement in the U.S. science and engineering community by supporting innovative, international research and education collaborations. The program will enable U.S. scientists and engineers to establish collaborative relationships with international colleagues in order to advance new knowledge and discoveries at the frontiers of science and engineering and to promote the development of a diverse, globally-engaged U.S. scientific and engineering workforce. International partnerships are, and will be, increasingly indispensable in addressing many critical science and engineering problems. As science and engineering discoveries result more and more from international collaboration, U.S. researchers and educators must be able to operate effectively in teams comprised of partners from different nations and cultural backgrounds.

The PIRE program will support bold, forward-looking research whose successful outcome results from all partners - U.S. and foreign - providing unique contributions to the research endeavor. It is also intended to facilitate greater student preparation for and participation in international research collaboration, and to contribute to the development of a diverse, globally-engaged U.S. science and engineering workforce. The program aims to support partnerships that will strengthen the capacity of institutions, multi-institutional consortia, and networks to engage in and benefit from international research and education collaborations.

### Educational Opportunity

This program provides educational opportunities for undergraduate students, graduate students, and postdoctoral fellows. The program supports institutions which may provide support to individuals at those institutions.

### Position Announcements

#### **3. Faculty Position The Florida State University, Extreme Events in Climate**

**<http://www.met.fsu.edu/index.pl/personnel/faculty/extreme>**

As part of Florida State University's new initiative to hire 200 new faculty members within the next few years ([pathways.fsu.edu](http://pathways.fsu.edu)), six new tenure-track faculty positions in the general area of extreme events and climate will occur over the next three years. These positions are a combined initiative in the departments of Meteorology, Oceanography, and Geological Sciences at FSU to build a cluster of faculty interested in extreme events and their variability and their effect on climate. This year we anticipate making two hires at the full professor level; however, we invite interested candidates at all levels to apply. These initial hires are expected to be involved in future hiring decisions. All positions are state-funded, nine-month academic positions, and salaries will be commensurate with experience. The home department for the faculty hires will depend on the expertise of each hire. The successful applicants for the EEC positions will be expected to demonstrate a commitment to excellence and innovation in undergraduate and graduate teaching, develop and sustain an externally-funded high quality research program, and regularly publish high quality, creative new findings in the best journals. We anticipate this group to be active in the development of new curricula and programs spanning the geosciences. Applicants at the full professor level are expected to have demonstrated a sustained externally-funded research program that has achieved substantial professional recognition.

The EEC cluster is dedicated to understanding and predicting the frequency and intensity of such extreme events as hurricanes, forest fires, red tides, and severe storms and their links with past, present, and future climate. Areas of interest for hiring within the cluster include: (1) Climate modeling, including the ability to downscale to regional variability, with a focus on extreme events and climate change; (2) Severe storm modeling, including the capability of linking such events to larger scale climate dynamics; (3) Statistical climatology, with a focus on expertise in the analysis and modeling of stochastic processes; (4) Sediment and chemical transports related to extreme events from observations through erosion models to larger-scale climate modeling; (5) Biogeochemical modeling or physics as related to water and air quality variability due to extreme events and linkages with larger-scale climate.

The search committee will commence its initial screening of applications on 1 December 2006. However, the search process will remain active until the positions are filled.

#### **4. Research Scientist in Ocean Remote Sensing at NASA's Jet Propulsion Lab**

The Jet Propulsion Laboratory invites applications for a full-time position in the field of satellite oceanography and ocean remote sensing. The applicant will join a broad-based team of researchers in oceanography, who analyze spaceborne and complementary in-situ observations, carry out ocean modeling and data assimilation, support existing ocean satellite missions and help develop new remote sensing techniques for future satellite oceanography missions.

The successful applicant should have a Ph.D. degree plus 8+ years of research experience in the field of satellite oceanography and ocean remote sensing, as evidenced by a significant record of

peer-reviewed publications and funded research proposals. Emphasis will be on remote sensing of sea surface height, salinity, temperature, vector winds, color and marine gravimetry. Experience developing satellite data retrieval algorithms, instruments, methods for data analysis or sensor calibration and validation, and in the design of satellite missions are desirable. The incumbent will analyze and interpret data from an array of instruments, and participate in establishing the science foundation and requirements for future satellite oceanography missions. Opportunities exist to participate in existing satellite oceanographic missions and science teams (<http://climate.jpl.nasa.gov/missions/>). The incumbent is expected to support future satellite oceanography missions as recommended by the Decadal Survey study (<http://nasascience.nasa.gov/earth-science/decadal-surveys>).

There are collaborative opportunities with nearby universities such as the California Institute of Technology and the University of California at Los Angeles (UCLA). Joint research faculty appointments with UCLA can be made through the Joint Institute for Regional Earth System Science and Engineering (JIFRESSE, <http://www.jifresse.ucla.edu>). Familiarity with NASA's satellite oceanography missions and programs is desirable. Startup funds will be available for up to three years, during which time the successful candidate will develop an externally funded research program.

If you'd like to join the JPL Oceanography program, please apply online at: <http://Careerlaunch.jpl.nasa.gov/>. (Job ID#8012). Applications will be reviewed as they are received. The applicant should include a curriculum vitae, list of peer-reviewed publications, names and contact information of at least three professional references, and a statement of research interests.

#### **5. Executive Director, IPCC Working Group II Technical Support Unit**

The Technical Support Unit (TSU) provides technical and administrative services in support of assessment deliverables. A TSU Head is sought to provide senior level scientific leadership for the assessment programs of IPCC Working Group II; to work with the co-chairs to structure, summarize, and disseminate scientific content of findings generated by and during the assessment process; and to provide scientific leadership and direction to TSU staff in support of IPCC-wide commitments. Primary emphasis will be on scoping, preparation, and review of the Working Group II contribution to the Fifth Assessment Report (AR5), to be published in 2014. Requires Ph.D. in social or natural science discipline relevant to the assessment of global climate change and climate variability, as well as 10 or more years' experience conducting research on climate impacts. Experience with management of multidisciplinary scientific groups and a distinguished impacts, adaptation, and vulnerability (IAV) publication record are required. Experience working within IPCC or comparable United Nations processes is desired. This is a term position through 30 September 2009, with possibility of annual extensions through FY2014. It is located at the Carnegie Institution for Science in Stanford, California, USA. Relocation expenses will be covered. To view the complete job description and apply, visit <http://www.fin.ucar.edu/hr/employment> (reference job #9047 under 'Current Job Openings/Scientific'). Initial consideration will be given to applications received prior to 1/23/2009. Thereafter, applications will be reviewed on an as-needed basis.

#### **6. Post-doctoral position at the Department of Geophysics, Universidad de Chile**

Candidates interested in any of the research areas at DGF, an enthusiastic, independent but collaborative young researchers interested in aerosol-cloud interactions over the South East Pacific or in South American Mega-cities. The former theme will be developed around the VOCALS REx campaign (<http://www.eol.ucar.edu/projects/vocals/>) that took recently place over Northern Chile and Southern Peru (The emphasis being put -most likely- on sulfur aerosols

associated with natural -oceanic/volcanic- and anthropogenic sources). The latter will be connected to the project South American Emissions Mega-cities and Climate (SAEMC, <http://saemc.cmm.uchile.cl/>), with emphasis on the development of past-present and future climate scenarios (including atm. chemistry) or chemical weather.

For more information:

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### **Meetings and Workshops**

#### **7. AMS Short Course: Modern Era Retrospective-analysis for Research and Applications (MERRA)**

The short course is being held January 10, the day before the AMS annual meeting in Phoenix AZ. The full description of the short course is available at:

<http://www.ametsoc.org/MEET/annual/shortcourses.html#modern>

The primary source of information on the GMAO MERRA project is at:

<http://gmao.gsfc.nasa.gov/merra/>

#### **8. IAMAS/IAPSO Joint Symposium**

**Palais des Congres, Montreal, Quebec, Canada during 19 - 24 July, 2009**

**Joint Symposium 09 (J09) Interannual and Interdecadal Climate Variability and Predictability** with Special Sessions on Chaos and Nonlinearity in the Climate System Dedicated to the Memory of Professor Edward N. Lorenz

Confirmed Invited Speakers:

- \* Ichiro Yasuda, University of Tokyo, Japan
- \* Mark Serreze, NSIDC/ CIRES, USA
- \* Judith Perlwitz, CIRES, USA
- \* Shang-Ping Xie, University of Hawaii, USA
- \* Ben Kirtman, University of Miami, USA
- \* Jerry Meehl, NCAR, USA
- \* Fei Fei Jin, University of Hawaii, USA
- \* Richard Seager, Lamont-Doherty Earth Observatory, USA
- \* Tim Palmer, ECMWF, UK

Sponsoring Associations: IAMAS/IACS/IAPSO

Convenors: Clara Deser (IAMAS), Paul Kushner (IAMAS), Klaus Dethloff (IACS), Shoshiro Minobe (IAPSO)

**Abstract deadline is January 23, 2009 (submissions at <http://www.moca-09.org/e/J09.shtml>).**

J09 Session Description

Although climate predictions are demanded on increasingly fine regional scales, the climate system is dominated on interannual-to-decadal timescales by large-scale patterns that control regional climate. These patterns couple distinct components of the climate system and disparate regions of the globe, and as a result remain a challenge to simulate and to understand. This symposium aims to synthesize our current knowledge of and our ability to predict interannual-to-decadal variability. We solicit papers that elucidate the mechanisms of interannual to decadal

variability and lend insight into how coupled climate interactions - atmosphere-ocean-sea ice, troposphere-stratosphere, biosphere-climate, chemistry-climate, etc. - give rise to this variability. The symposium will include sessions on important sectors of interannual-to-decadal variability:

- \* Indian and Pacific Ocean sectors
- \* Atlantic sector (including North America/Europe)
- \* Southern Hemisphere (including Antarctica)
- \* Arctic sector

as well synthesis sessions providing

- \* Perspectives on our theoretical understanding of interannual-to- decadal timescale variability.
- \* Perspectives on climate prediction on interannual to decadal timescales via simulation with comprehensive climate models.

In light of Professor Edward N. Lorenz's fundamental contributions to our understanding of nonlinear chaotic dynamics and of climate system dynamics, MOCA-09 will dedicate part of this symposium to the theme "Chaos and Nonlinearity in the Climate System" in Professor Lorenz's honour. This part of the symposium will highlight recent advances in the analysis of chaotic systems and applications to climate. It will also seek to develop new questions of theoretical interest that arise from observations and models of climate dynamics, with an emphasis on nonlinear aspects of climate, such as nonlinear feedbacks and the effect of nonlinearity on predictability.

#### **J17 Monsoon Observations, Modelling and Prediction**

Confirmed invited speakers: Zhisheng An, Congbin Fu, Behera Swadhin, Gabriel A. Vecchi, DongXiao Wang, Peter Webster

**The deadline for submission of abstracts is January 23, 2009.**

Sponsoring Associations: IAMAS/IAPSO

Convenors: Takehiko Satomura (IAMAS), Jianping Li (IAMAS), Jay McCreary (IAPSO)

#### **Description:**

The scientific importance of the monsoons cannot be overemphasized. They impact climate, both regionally and globally, and interact with the El Niño-Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) modes of climate variability. They involve complex multi-scale interactions among the Earth's atmosphere, ocean, land surface, cryosphere, and biosphere, including human activities (land use/cover, atmospheric composition, aerosols, etc.). Furthermore, the economies of many countries in monsoon regions are strongly impacted by monsoon-related droughts and floods. Future change in the monsoon climate is also of the greatest concern to the world economy and to sustainable development. A number of monsoon experiments have been carried out recently to understand monsoon physics. They include the SCSMEX, GAME, NAME, MESA, AMMA, projects, which have been carried out or are currently underway. In addition, the Asian Monsoon Years (AMY 2007-2012) and International Monsoon Study (IMS, 2008-2012) are new WCRP initiatives to study the monsoon, and their first intensified observation periods (IOPs) will have just finished by the time of the Montreal 2009 Joint Assembly. Therefore, this joint symposium provides an excellent opportunity for scientists to present new outcomes on interactive monsoon systems from the most recent experiments. The symposium will be focused on the following topics: 1) The effects of interactions among atmosphere, ocean, land surface, cryosphere, and biosphere, including human activities, on monsoons 2) The characteristics and mechanisms of monsoon variability at different time scales, and monsoon predictability and prediction 3) Initial results from the IOPs of IMY and AMY and the latest advances from SCSMEX, GAME, NAME, MESA and AMMA

Other monsoon related topics are also welcome. Observational, modelling and theoretical studies are all encouraged.

**9. European Geosciences Union meeting  
Vienna, 19-24 April 2009**

Ocean Remote Sensing

<http://meetingorganizer.copernicus.org/EGU2009/session/715>

Advanced remote sensing capabilities provide unprecedented opportunities for monitoring, studying, and forecasting the ocean environment. An integrated approach of synthesizing remote sensing data with in situ measurements and ocean models is highly desirable, both for physical and biological oceanography and for marine gravity and geodesy on the regional, basin and global scales. This session provides a forum for interdisciplinary discussions of the latest advances in all aspects of oceanographic applications of remote sensing.

At EGU 2009, there will be a special focus on the recently launched JASON-2 altimetry mission. Papers on all aspects of this mission including cal/val and other early results are particularly welcome.

Beyond JASON-2, topics for this session include but are not limited to (1) physical oceanographic variability and interactions with the atmosphere (2) biological variability and the carbon cycle, (3) marine gravity and space geodesy missions, and (4) development of new techniques in ocean remote sensing. Papers on emerging technologies and new sensors including those deployed on aircraft and on operational applications are also encouraged.

**10. GEWEX 6<sup>th</sup> International Scientific Conference on the Global Energy and Water Cycle  
Melbourne, Australia on 24-28 August 2009**

Abstracts are requested for sessions on:

--Sixth International Scientific Conference on the Global Energy and Water Cycle

--Second Integrated Land Ecosystem-Atmosphere Study Science Conference

The overall theme of both conferences is: Water in a Changing Climate--Progress in Land-Atmosphere Interactions and Energy/Water Cycle Research. The conferences will hold joint sessions on three common themes with keynote talks, oral and poster presentations. The parallel conferences will have three joint sessions that broadly cover the following themes: (1) Land in the climate system; (2) Aerosol, cloud, precipitation, climate interactions; and (3) Future generation of integrated observation and modelling systems. Complete information about the conferences and sessions can be found at: [http://gewex.org/2009gewex\\_ileaps\\_conf.html](http://gewex.org/2009gewex_ileaps_conf.html)  
To submit an abstract: [http://gewex.org/2009gewex\\_ileaps\\_conf\\_abstracts.html](http://gewex.org/2009gewex_ileaps_conf_abstracts.html)

**It is expected that registration will open in February 2009.**

**11. 41st International Liège Colloquium on Ocean Dynamics  
"Science based management of the coastal waters" 4-9 May, 2009**

<http://modb.oce.ulg.ac.be/colloquium/>

The 41st International Liège Colloquium on Ocean Dynamics will provide a forum to present and discuss recent scientific advances in the field of Integrated Coastal Zone Management, to compare the modeling and experimental approaches set up in various case studies and to identify the need for future developments. The emphasis will be particularly put on the understanding of the dynamics of coastal waters and on the development of appropriate tools and methodologies to address the issues of coastal oceanography; prevention and mitigation of coastal hazards and pollution (including coastal eutrophication); long term geomorphological changes; global changes

in the coastal zone (including downscaling issues); operational oceanography and monitoring systems; social and economic aspects of ICZM multifunctionality and evaluation.

The format of the presentation (45 minutes), with no parallel sessions and only 100 participants, favor fruitful exchanges between the participants.

For further information: <http://modb.oce.ulg.ac.be/colloquium/>

## **12. Regional Modeling Workshop**

**Lund University, Sweden**

**4 - 8 May 2009**

**<http://www.baltex-research.eu/RCM2009/>**

The conference is a follow-up to the regional-scale climate modeling workshop held in Lund, Sweden in 2004. Developments and progress achieved in the last five years will be presented and discussed along with open issues and expected future challenges related to regional climate modeling. The meeting will cover a wide range of RCM-related topics from basic research - such as theoretical aspects of numerics and parameterizations – to applications such as impact studies in the context of climate variability and change. The workshop is endorsed by the World Meteorological Organization (WMO), its World Climate Research Programme (WCRP), the Global Energy and Water Cycle Experiment (GEWEX) and its Regional Hydroclimate Project BALTEX, as well as by the EU/FP6 project ENSEMBLES and the North American Regional Climate Change Programme (NARCCAP).

## **13. North American Carbon Program All-Investigators Meeting**

**Feb. 17-20, 2009, in San Diego, CA**

**[http://www.nacarbon.org/meeting\\_2009/index.htm](http://www.nacarbon.org/meeting_2009/index.htm)**

Those PIs who are funded by NOAA to study the carbon cycle, including ocean scientists, should plan on attending this meeting.

### **ANNOUNCEMENTS:**

- **Eighth Workshop on Decadal Climate Variability: Decadal Nowcasting, Forecasting, and Societal Impacts Postponed to September-October 2009. More information will be available in March.**
- **JASON-2 Data Now Available**

NOAA announced that scientists around the world now have access to valuable data from a new international satellite, the Jason-2/Ocean Surface Topography Mission. This information allows them to closely watch the rate of global sea-level rise and monitor changing ocean features around tropical cyclones.

Jason-2/OSTM, launched June 20, 2008, is a joint effort between NOAA, the National Aeronautics and Space Administration, France's Centre National d'Etudes Spatiales (CNES) and the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT). After five months of calibration and validation activities an international team of scientists, including representatives from NOAA, declared the near real-time Jason-2 data were ready for public distribution.

The new OSTM/Jason-2 Operational Sensor (Geophysical) Data Record (OSDR/OGDR) will start on 15 December on Eumetsat and NOAA Services. The OSDR/OGDR is a new, real-time operational product specially developed for the Jason-2 mission. The OSDR/OGDR will be the faster product delivered to the users, with a short delay of 3 - 5 hours. It is processed by the operational agencies partners, NOAA and Eumetsat. Note that this is a non-validated product that uses orbits computed by the on-board Doris Navigator (DIODE) and that it does not contain all the environmental/geophysical corrections.

The real-time operational product comprises three Jason-2 OGDR products:

- \* A nominal product, containing sea surface height, significant wave height and ocean surface wind speed parameters, in NetCDF format, see OGDR near-real time page product

- \* A BUFR format version of the the nominal product, see OGDR near-real time page product.

- \* A reduced product containing mean sea surface parameters, in NetCDF format, see OGDR-SSHA.

Other OSTM/Jason-2 data (in near-real time -IGDR- and delayed time -GDR-) will remain restricted, as long as the Calibration/Validation phase will last.

Users interested in receiving these real-time data should register with the user service, ie [http://www.class.ngdc.noaa.gov/saa/products/search?datatype\\_family=J2-XGDR](http://www.class.ngdc.noaa.gov/saa/products/search?datatype_family=J2-XGDR)