

CODATA

Newsletter 102

Committee on Data for Science and Technology

23rd International CODATA Conference

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IN COLLABORATION WITH THE ACADEMY OF SCIENCES LOCATED IN TAIPEI

October 2011

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Open Data and Information for a Changing Planet will be the theme of the 23rd International CODATA Conference.

Never before has the importance of scientific data and information played such a major role in addressing the problems and challenges facing our planet as it does in the 21st century, and calls for freely available, publicly accessible data are gaining a stronger voice. For a recent example, a June 2011 editorial in Nature called attention to the value of open access to global nuclear-monitoring data, and the benefits such data could have for a variety of applications, "in times of both calm and crisis."



CODATA 23
Taipei 2012

If you want to publish a short article in a CODATA newsletter please contact Cécile Carbonell at codata@dial.oleane.com

The theme **Open Data and Information for a Changing Planet** encompasses some particularly relevant issues in data-intensive scientific fields. Nurturing an open environment for data and information is crucial for disseminating research results to a wide audience and allowing thorough, collaborative analysis. Also, the theme distinguishes between data and information to emphasize the role data-intensive science plays in transforming raw observations into applicable, intelligible results and discoveries. Furthermore, the theme underscores that our scientific endeavors, and the data that sustain them, are key to providing reasoned solutions to the problems we face with climate change, population

pressure, natural hazards, and other global issues. The theme supports not only the mission of CODATA, but that of ICSU, as it strives to strengthen international science for the benefit of society.

CODATA 23 will bring together stakeholders from industry, research, academia and government to highlight, debate and address these issues over a three day period.

CODATA 23 provides an international forum where these stakeholders, in collaboration with the CODATA international network of National, Union and Co-opted members, its Task Groups, and Supporting Organizations, can create a dialog on legal, economic, and .../...

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.../... technological challenges; evaluate societal impacts; and put forward possible solutions that can in turn benefit the planet. Nurturing an open environment for data and information plays a pivotal role in this process. This will be the underpinning message of the conference.

CODATA recognizes the importance of involving and working with early career scientists in discussing these issues. They are the scientists that will have to address these challenges

tomorrow. CODATA 23 will thus build on strengthening interaction between young scientists and senior scientists on data. This interaction was first launched at CODATA 21 and was developed at CODATA 22. Special young scientist activities and social events will also take place within the framework of the scientific program.

The biennial CODATA Prize will also be awarded at the event to a recipient for his or her outstanding

contribution in the field of data and information science. Over the next few months, additional information will be available on this and all events and sessions that will take place in Taipei.

The Conference website will be launched shortly. In the meantime we invite you to browse <http://www.codata.org> and learn more about our activities.

CODATA 45 YEARS ON



its national members and task groups, national academies of sciences, other international scientific organizations, as well as selected attendees from the Integrated Research on Disaster Risk Conference 2011 which takes place immediately following the event.

More detailed information on the event will be available on our website: <http://www.codata.org>

This year marks an important milestone in the decades-long history of the **ICSU Committee on Data for Science and Technology (CODATA)**. On Sunday, October 30th, 2011, **CODATA** will celebrate its 45th anniversary with a high-level scientific meeting in Beijing themed "**Data-Intensive Science and Discovery—CODATA 45 years on**".

Throughout the latter half of the 20th century, and now into the 21st century, **CODATA** has played a leading role in promoting improved scientific and technical data management and use for the benefit of science and society in general. The meeting is intended to not only recognize **CODATA's** accomplished past, but to hold in-depth discussions on the current state and future of discovery and innovation in the age of data-intensive science.

In attendance will be a global representation of over 100 experts and senior scientific authorities from **CODATA**,



Frederick Rossini, 1st CODATA President

US CODATA/BRDI INTERNATIONAL SYMPOSIUM AND WORKSHOP ON DEVELOPING DATA ATTRIBUTION AND CITATION PRACTICES AND STANDARDS

On 22-23 August, 2011, US CODATA and BRDI (Board on Research Data and Information), in collaboration with the CODATA-ICSTI (International Council for Scientific and Technical Information) Task Group on Data Citation Standards and Practices, held a 2-day international symposium and workshop in Berkeley, California. The meeting involved discussions on a) the major universal as well as field-specific or context-specific technical issues that need to be considered in developing and implementing scientific data citation standards and practices; b) the major universal as well as field-specific or context-specific institutional, financial, legal, and socio-cultural issues that need to be considered in developing and implementing scientific data citation standards and practices; and c) the status of data attribution and citation practices in individual fields in the natural and social (economic and political) sciences in United States and internationally.



US CODATA/BRDI International Symposium in Berkeley - photo contributed by Monica Duke

The Symposium Steering Committee Chair, Christine Borgman (UCLA), opened the meeting with a keynote presentation entitled "Why Are the Attribution and Citation of Scientific Data Important?" The meeting proceeded with five sessions of presentations from representatives at academic, NGO, government, funding, data center, publishing, library, and other sectors. Each session focused on a particular question:

- What are the major technical issues that need to be considered in developing and implementing scientific data citation standards and practices ?
- What are the major scientific issues that need to be considered in developing and implementing scientific data citation standards and practices ? Which ones are universal

for all types of research and which ones are field- or context- specific ?

- What are the major institutional, financial, legal, and socio-cultural issues that need to be considered in developing and implementing scientific data citation standards and practices ? Which ones are universal for all types of research and which ones are field- or context-specific ?
- What is the status of data attribution and citation practices in individual fields in the natural and social (economic and political) sciences in United States and internationally ?
- Case Studies.
- What are the respective roles and approaches of the main actors in the research enterprise and what are the similarities and differences in disciplines and countries ? The roles of research funders, universities, data centers, libraries, scientific societies, and publishers will be explored.

Options on where do we go from here ?

On the afternoon of the second day, participants were divided into small groups to determine options for

taking action to address these questions. Additionally, there was a group discussing what issues would be useful to get additional feedback on from the scientific community (and how) in order to identify best practices for data citation practices and standards. The meeting background, agenda, speaker bios, and presentation slides are available at: http://sites.nationalacademies.org/PGA/brdi/PGA_063656.

This meeting is part of a longer CODATA-ICSTI Task Group activity that will develop a white paper on best practices in scientific data citation in 2012-2013. The Task Group Co-Chairs are Bonnie Carroll, Jan Brase, and Sarah Callaghan. The BRDI/US CODATA staff is also the staff for the CODATA-ICSTI Task Group and includes Paul Uhler (Director), Dan Cohen, and Cheryl Levey.

Article written by Cheryl Levey and Paul Uhler

WORKSHOP ON OPEN KNOWLEDGE AND DATA ENVIRONMENT FOR INNOVATIVE RESEARCH ON POVERTY-FREE AND ECOSYSTEM PROTECTION IN ASIA

The Science Council of Asia (SCA), the CODATA Task Group on Preservation of and Access to Scientific Data in Developing Countries (PASDDC/CODATA), the Working Group on Information Systems and Services of the Committee on Earth Observation Satellites (WGISS/CEOS) and the GIS and Remote Sensing Laboratory of the National University of Mongolia (NUM) jointly organized an international workshop on Open Knowledge and Data Environment for Innovative Research, Education and Society (OKDE) in Asia during July 4-6, 2011 in Ulaanbaatar, Mongolia. The objectives of the workshop were: (1) to enhance the common understanding of the principles and guidelines of OKDE for Innovation Research, Education and Society in Asia; (2) to present progress on OKDE from each of partners; and (3) to prototype joint efforts on the OKDE platform – Digital Geo-Museum Network of Asia. There were about forty participants, comprised primarily of SCA members and local researchers.

The workshop was divided into three sessions. The first session, led by Professor Liu Chuang, Primary Investigator of the SCA joint project on OKDE, provided background information about CODATA, SCA and WGISS/CEOS, along with principles and guidelines of OKDE in Asia. An expected prototype of the OKDE Platform on Digital Geo-Museum Network in Asia was also addressed. The second session was co-chaired by Prof. GU Xingfa, Co-Chair of PASTDDC/CODATA and Dr. Pakorn Apaphant, WGISS Chair. Progress on some case studies of OKDE in Asia was reported and discussed. A framework on the regional Natural Disaster Management Plan was also introduced. In the third session, the mee-



Workshop in Mongolia - photo contributed by Liu Chuang

ting planned for a Prototype of OKDE in Asia via the Digital Geo-Museum project. The establishment of the Digital Geo-Museum is a challenging and promising initiative for the OKDE. To achieve the success as planned, this project needs to strongly coordinate and obtain support at both regional and global levels. The meeting agreed that OKDE was considered one of the key activities for human resource development. This initiative will therefore provide an important opportunity to share and exchange knowledge on Earth Observation.

Pakorn Apaphant, GISTDA, Thailand, and Liu Chuang, Institute of Geography and Natural Resources, CAS, China

FORTHCOMING MEETINGS

- **IRDR Conference "Disaster Risk: Integrating Science and Practice"**, 31 October-2 November 2011 - Beijing, China
- **The PV-2011 Workshop**, 15-17 November 2011 - Toulouse, France
- **GEO - VIII Plenary Session**, 16-17 November - Istanbul, Turkey
- **7th International Digital Curation Conference: "Public? Private? Personal? Navigating the Open Data Landscape"**, 5-7 December 2011 - Bristol, UK
- **IEA 2012**, 12-16 February 2012 - Recife, Brazil
- **Planet under Pressure: New Knowledge towards Solutions**, 26-29 March 2012 - London, UK
- **1st Global Thematic IASC Conference on the Knowledge Commons "Governing Pooled Knowledge Resources in a World of Rapid Social and Technological Change. Building Institutions for Sustainable Scientific, Cultural and Genetic Resource Commons"**, 12-14 May 2012 - Louvain-la-Neuve, Belgium
- **The 4th Qualitative and Quantitative Methods in Libraries International Conference (QQML2012)**, 22-25 May 2012 - Limerick, Ireland