

CODATA

Newsletter 105

Committee on Data for Science and Technology

23rd International CODATA Conference

Taipei 28-31 October 2012

December 2012

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If you want to publish a short article in a CODATA newsletter please contact Sally Davies at codata.office@gmail.com

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Opening ceremony

The 23rd CODATA Conference took place in Taipei in October 2012 and had as its theme “Open data and information for a changing planet”. The focus on open data was very timely as many organisations around the world are actively considering the benefits and the practicalities of open data, for example the European Commission’s revised directive on public sector information. The part of the conference title on our changing planet had a link to the major ICSU meeting in March 2012 on Planet under Pressure and to the Rio+20 Conference on sustainable development in June 2012. There is no question that rapid change is characteristic of modern science and

society in many sectors, not just in environmental science. Biomedicine, materials science and social science are all sectors that are both studying and experiencing rapid change. In this broad context the CODATA Conference was able to contribute to the very important debate on open data and information for a changing planet.



CODATA 23
Taipei 2012

One key characteristic of the CODATA Conference was the very broad spread of highly interesting science. The opening three keynote speakers set the tone

by presenting fascinating and up to date material on the diverse topics of disasters, high energy physics and e-culture. This broad spread



A SPECIAL THANK YOU TO ACADEMIA SINICA AND THE LOCAL ORGANIZATION COMMITTEE

CODATA would like to sincerely thank the Academia Sinica, Taipei, for hosting the 23rd International CODATA Conference and the 28th CODATA General Assembly on its state-of-the-art campus. Further, it would like to extend a very warm thank you to Dr. Der-Tsai Lee and Dr. Tyng Ruey Chuang who with their team were directly responsible for the success of this event.

.../... of interesting science is one of CODATA's great strengths. The Conference had over 200 oral presentations, over 20 poster papers, six keynote addresses and five high level discussion sessions. This mix provided Conference participants with the opportunity to listen to advances in data and information management and to contribute their views to debates on topics such as the ethics of handling data in science, the practical meaning of open access to data, and best practices for data sharing.

The major disciplinary themes of the Conference were concerned with evaluations of the role of data and information in public health, in biology and biomedicine, in disaster monitoring and response, in environmental science, and in materials science. A rapidly expanding theme in data science is to examine data as a publication and this theme was reflected in four sessions which showed the great strides that are being made through conventional publications and through new initiatives such as

data journals. Conference sessions were organised on the methodologies of data science such as open knowledge environments, collaborative knowledge management, data-intensive computing, data preservation and archiving, data mining and on the status of data policies. One area where disciplinary science and methodologies for data management come together is in the ICSU World Data System (WDS) for which the Conference had sessions on recent developments.

The venue for the Conference was the Humanities and Social Sciences Building of the Academia Sinica, a very high quality facility. The Local Organising Committee led by Professor Der-Tsai Lee are to be congratulated on producing the conditions for a stimulating and memorable 23rd CODATA Conference.

*Ray Harris,
Emeritus Professor of Geography,
University College London
Chair of the International Scientific
Program Committee, CODATA 2012*

Professor Michael F. Goodchild, Emeritus Professor of Geography at the University of California, Santa Barbara, becomes the 6th recipient of the CODATA Prize Award at the 23rd International CODATA Conference. The award acknowledges his outstanding contributions on the world stage to Geo-information Science. For more information go to <http://www.geog.ucsb.edu/~good>



*Professor Michel F. Goodchild,
Recipient of the 2012 CODATA Prize*

CODATA 2012 – AN EARLY CAREER SCIENTIST'S PERSPECTIVE

Chicken's feet on skewers, vivid orange pig's trotters with shiny glazes, and mandrake roots floating like little people in jars. The sights and the tastes of Taipei's night markets still filled my head as the cab turned onto the Academia Sinica campus, set amongst lush hills of dark forest. The venue was excellent, clean and modern; the main hall's seating was grand enough for heads-of-state at a summit, and the Conference kicked off with a beguiling Chinese traditional music ensemble, interpreting - funnily enough - familiar old Scottish folk tunes. At the opening buffet, any shyness melted away as each new acquaintance shared interests around the Conference theme of "open data and information for a changing planet". What a relief, all the travel was justified by the close fit with my research: how open data and the Web can advance environmental sustainability. The catering was delicious; I poured my first ever bowl of the famous birds' nest soup, tentatively chewing on avian saliva.

The 23rd CODATA Conference proved both interesting and useful; the main challenge was deciding which of the four parallel streams to attend when so many were compelling. Sessions tackled the role of data in areas as diverse as disaster reduction, monitoring dwindling fish stocks and, most intriguingly for my research, solar energy innovation, where there was talk of a new CODATA Working Group. Of particular interest was the role of data citation in incentivising sharing and valuing data science itself. On Monday afternoon, I presented my work on using interactive visualisations of open data to communicate climate change, leading to some engaging discussions and new connections.



*From left to right : Jack Townsend, Tomoko Doko,
Meng-shan Lee, Xiao-ling Lin.*

That evening, I was lucky enough to be invited to dinner with the very friendly group of early career attendees from Taiwan and around the world. We discussed ideas for how to grow early career membership, including supporting a core member group to attend each Conference, a mentorship programme, representation within the executive committee and outreach to recruit

CODATA 2012 – AN EARLY CAREER SCIENTIST'S PERSPECTIVE

new members. As a brand new member of the group, the next day I was somewhat startled to find myself in front of a review panel from ICSU and then meeting with Prof. Sara Graves, sharing our experiences on the Conference so far. Even more surprising was taking part in the closing ceremony on the main stage, when the early career participants were all formally recognised. Intrigued by my experiences, I gave up on some travel plans to attend the CODATA General Assembly (GA). A good reception was given at the



Prof. Sara Graves

GA to the presentation by the Early Career Group of its strategic action plan, and although no changes were enacted, the Working Group was approved for the next two years.

CODATA 2012 was a very privileged opportunity to connect with a distinguished global community who have stewardship of much of the world's scientific data. Speaking with the ICSU representatives was an opportunity to praise the Conference's emphasis on opening up data. I believe open scientific data are a major resource for

sustainable development as they facilitate both interdisciplinary research and reuse by a much broader range of actors. Moreover, opening up data can be a way for CODATA to connect with new communities like those at the Mozilla festival I went to two weeks later in London, packed with young people with a great enthusiasm for data as a key ingredient in building innovative apps and visualisations. Competitive data analysis and software creation events ("hackathons") could be an excellent way for CODATA to connect with these communities as well as: celebrating newly opened datasets; generating innovative new value from them; and raising the profile of CODATA and of data science itself. There is much scope for CODATA to further promote open scientific data, perhaps based on the Panton Principles, and within its Global Information Commons for Science Initiative Task Group, working with bodies like the Open Science working group of the Open Knowledge Foundation and the new Open Data Institute in the UK. For data to be open, the licenses need to be right, but just as importantly, they need to be machine-readable. Here, the gold standard is the "linked data" standards which allow a very broad range of data to be readily connected together. This grows the new Web of Linked Data, enabling full openness, "serendipitous" reuse and interdisciplinary research that are dependent on data sets from different disciplines. The Web of Linked Data is championed by professors of mine at Southampton,



Early Career Scientists' Award Ceremony

including Tim Berners-Lee inventor of the World Wide Web (of documents). There is exciting potential for CODATA to provide global leadership on open data by promoting standardisation around linked data, including placing it at the heart of the CODATA 2014 Conference.

All in all, CODATA 2012 was enlightening, entertaining and inspiring. The Taiwanese people are very friendly and always keen to help; travel is easy and the country boasts some magnificent landscapes. As a newcomer, I really felt welcomed at the Conference, and strongly encourage other early career data professionals to participate in CODATA 2014.

*Jack Townsend,
Web Science Researcher,
University of Southampton
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Welcome to New National Members!

CODATA is delighted to announce that **Mongolia**, represented by the Mongolian Academy of Sciences, joined the CODATA family in 2012. **Finland** and **Czech Republic** will also come on board as new members in 2013.

CODATA is delighted to announce that the 24th International CODATA Conference and the 29th CODATA General Assembly will take place in New Delhi, India.

More details will follow in the next Newsletter.

CANADA HOLDS SUCCESSFUL RESEARCH DATA SUMMIT

A highly successful Canadian Research Data Summit, **Mapping the Data Landscape**, was held on September 14 and 15, 2011, in Canada's capital city (Ottawa). Over 150 leading players and decision-makers from government, private sector, academia and other non-government organizations met to formulate a shared strategy for addressing the challenges and opportunities for maximizing the benefits of our collective investment in research data in Canada.

The Summit was organized by the **Research Data Strategy Working Group** (RDS WG), whose membership includes representatives from the Canadian National Committee for/CODATA as well as the major Canadian granting agencies (supporting science and engineering, social sciences and humanities, and health). A number of strategic organizations were also present as partners: International Polar Year, Genome Canada, IBM, eVision, CASRAI (Consortia Advancing Standards in Research Administration Information) and CANARIE (Canada's Advanced Research and Innovation Network).

The **report from the Data Summit** captures the tone and outcome of Summit discussions and suggests a path for the future of data management in Canada. One of the first actions identified will involve a broadening of the membership of the RDS Working Group (the organizing body) and establishment of a national advisory council of senior representatives from industry, acad-

emia, government research labs, funding agencies, and policy makers. Preliminary work will be undertaken to plan and launch Research Data Canada, which will be a multi-stakeholder organization, whose main purpose will be to play a coordinating role in driving efforts forward to ensure that the full value of the wealth of Canada's research data is realized.

The RDS WG is a collaborative effort launched in 2008 to address the challenges and issues surrounding the access and preservation of data arising from Canadian



research. This multi-disciplinary group of universities, institutes, libraries, operators of research infrastructure, granting agencies, governments, and individual researchers are united through a shared recognition of the pressing need to deal with Canadian data stewardship issues. Together, they are focussing on the necessary actions, next steps and leadership roles that researchers and institutions can take to ensure Canada's research data are accessible and usable for current and future generations of researchers.

Mary Zborowski
Executive Secretary,
Canadian National Committee for CODATA

A NEW EXECUTIVE COMMITTEE FOR CODATA

Officers:

President: Huadong GUO (Chinese Academy of Sciences, CAS, China)
Vice-Presidents: Takashi GOJOBORI (Japan) and Fedor KUZNETSOV (Russia)
Secretary General: Sara GRAVES (USA)
Treasurer: John BROOME (Canada)

Ordinary Members:

Niv AHITUV (Israel)
Alok BHATTACHARYA (India)
Bonnie CARROLL (USA)
Hiro-o HAMAGUCHI (Japan)

Der-Tsai LEE (Academy of Sciences located in Taipei, China)
Refiloe MABASO (South Africa)
Mark THORLEY (UK)
Mary ZBOROWSKI (Canada)

For more information check: <http://www.codata.org/about/executive-committee.html>

The first meeting of the new Executive Committee will take place at CODATA Headquarters in Paris in April 2013.



COLLABORATION WITH GEOSS, GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS



In the lead up to the IX GEO Plenary in Brazil in November (<http://www.earthobservations.org/geo9.shtml>) CODATA, one of the Co-Chairs of the GEO Data Sharing Working Group (DSWG), organized a special side event highlighting the work of the DSWG.

For more information on this event check the agenda on http://www.codata.org/GEOSS/Agenda_Side_Meeting_Nov2012.pdf

The 28th CODATA General Assembly approved the following Task Groups for the period 2013-2014:

Advancing Informatics for Microbiology
 Anthropometric Data and Engineering
 Data at Risk
 Data Citation Standards and Practices
 Earth and Space Science Data Interoperability
 Exchangeable Materials Data Representation to Support Scientific Research and Education
 Fundamental Constants
 Global Information Commons for Science Initiative
 Global Road Data Development
 Linked Open Data for Global Disaster Risk Research
 Octopus: Mining Space and Terrestrial Data for Improved Weather, Climate and Agricultural Predictions
 Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (PASTD)

For more information on these Task Groups please check our website at <http://www.codata.org/taskgroups/index.html>

FORTHCOMING MEETINGS

8th International Digital Curation Conference: "Infrastructure, Intelligence, Innovation: driving the Data Science agenda", 14-16 January 2013 - Amsterdam, Netherlands

The Third International Conference on Digital Information Processing and Communications (ICDIPC2013), 30 January-1 February 2013 - Dubai, UAE

International Interdisciplinary Conference on Geo- and Environmental Information and Communication: "Achieving Sustainability Goals through Knowledge Sharing", 6-8 February 2013 - Bogota, Colombia

International Workshop on "Motion and Vital Data Acquisition, Storage and Trends-Predictive Analysis for Aging Population", 25-27 February 2013 - Tel Aviv, Israel

The Second International Conference on Digital Enterprise and Information Systems (DEIS 2013), 4-6 March 2013 - Kuala Lumpur, Malaysia

The Second International Conference on e-Technologies and Networks for Development (ICeNd 2013), 4-6 March 2013 - Kuala Lumpur, Malaysia

The Second International Conference on Cyber Security, Cyber Warfare and Digital Forensic (CyberSec 2013), 4-6 March 2013 - Kuala Lumpur, Malaysia

The First International Conference on Green Computing, Technology and Innovation (ICGCTI 2013), 4-6 March 2013 - Kuala Lumpur, Malaysia

The International Conference on E-Technologies and Business on the Web (EBW2013), 4-6 March 2013 - Kuala Lumpur, Malaysia