



***CODATA International Training Workshop in Big Data for Science,
for Researchers from Emerging and Developing Countries***

Beijing, China; 4-20 June 2014

Applications are invited from young researchers, research leaders and managers of research institutes in emerging and developing countries to participate in the CODATA International Training Workshop in Big Data for Science, Beijing, 4-20 June 2014. Participation for successful applicants will be financially supported, thanks to a grant from the Chinese Academy of Sciences (CAS). The deadline for applications is 16 April.

Workshop Objectives

New types of 'mega-science' facilities and sensors are generating streams of digital data from telescopes, video cameras, traffic monitors, magnetic resonance imaging machines, and biological and chemical sensors monitoring the environment. This is a Big Data age, and it presents many exciting opportunities to make scientific research more productive, to accelerate discovery and innovation, and thereby to address key environmental, developmental and societal challenges.

The mission of [CODATA \(Committee on Data for Science and Technology\)](#) is to strengthen international science for the benefit of society by promoting improved scientific and technical data management and use. Organizing, for international participants, technical training in data science, in data management and on the implications of 'Big Data' for science is one of the most important means by which this mission can be realized.

The training program offered aims to engage participants with a number of facets of data science and data management in the Big Data age. Topics include, but are not limited to, interdisciplinary applications of data intensive research, data management policies, cloud computing, visualization and data infrastructure development in the Big Data Age.

Through an intensive program of lectures and workshop activities, the course will promote interaction and exchange of knowledge between experts and participants. It is intended that participants should benefit greatly from participation in a group from widely varying academic and national backgrounds.

A number of activities will be organized involving elite Chinese scientists, in order to promote knowledge sharing and to develop opportunities for future exchanges and collaboration. Participants will benefit also from visits to a number of leading research institutes of the Chinese Academy of Sciences (CAS). In these visits, participants will have the opportunity to learn from the scientific approach, management expertise, knowledge development and practical application which characterize activities at CAS institutes working at the frontiers of research.

On 8-9 June, CODATA is convening a major *Workshop on Big Data for International Scientific Programmes*, involving many international experts. Participants in the training workshop will benefit from participation also in this important event.

The workshop will offer training in Big Data management, analytics, technology and scientific practice for research community members from emerging and developing countries. Through a mix of theoretical study, workshop and practical sessions as well as field visits, the organizers aim to help participants develop a deeper expertise in the latest Big Data technologies for scientific discovery.



Course Contents

The Training Workshop curriculum will include:

- Welcome and introduction to CODATA
- Overview of CODATA Strategic Initiatives and Activities
- The Big Data Landscape: Definitions and Concepts
- Big Data applications
- Big Data management policies
- Big Data analysis and processing technology
- Cloud computing and data discovery, visualization
- Data description and documentation
- Data submission and acquisition
- Data support services
- Scientific data infrastructure development

More details about the training program will be provided shortly.

Training methods and activities

The program will take a comprehensive approach, including intensive theoretical lectures, advanced seminars and workshops covering workshop themes. Lectures and seminars will together account for 50% of the course time. For the remainder of the course, trainees will benefit from visits to famous CAS research institutes, high-tech corporations, involving meetings with elite Chinese scientists.

Participants

Intended participants include young researchers as well as more senior research leaders and managers of research institutes in countries with emerging and developing economies.¹ The total number of participants will not exceed twenty.

Program Language

English. Participants should have good command of English.

Examination and Certificate

When the program is completed, trainees will be awarded the Certificate of Program Completion. Participants will be required, before attendance, to prepare a presentation on their own country's scientific data initiatives and challenges. During the course, participants will be asked to develop this into a paper considering how Big Data may apply to scientific questions of importance within their country and internationally.

Date and Duration

The training program will take place from 4-20 June 2014.

Venue

Computer Network Information Center, Chinese Academy of Sciences, No.4, Nan 4th, Zhongguancun, Haidian District, Beijing, CHINA.

¹ The working definition used here is those countries *other* than the advance economies as defined by the IMF in its World Economic Outlook 20112 <http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/text.pdf>, Table B.



Sponsors

Committee on Data for Science and Technology (CODATA)

Chinese Academy of Sciences (CAS)

Organizers

CODATA Secretariat

Chinese National Committee for CODATA

Computer Network Information Center, Chinese Academy of Sciences

Training Expenses

1. The expenditure of training, international travel costs, board and lodging, local transportation for the purpose of training during the training period in China for the participants is to be funded by Chinese Academy of Sciences.
2. All the other possible expenses, such as insurance, cost of medical care, and telephone fees during the training period will be borne by the participants
3. The program organizer will buy Personal Accident Insurance for all participants during their training.

Participants Qualifications and Requirements For Admissions

1. To be nominated by his/her National Committee of CODATA or CODATA Taskgroups or related government;
2. To be under 50 years old and meet the requirements set in “trainees identity”;
3. Have a good health, no infectious disease and physically capability to fulfill all course activities
4. To be proficient in English reading, listening, speaking and writing
5. Not to bring any family members to attend the program
6. Pledge to observe all the laws and regularities of the P.R. China and respect the local customs during the training period in China
7. Prepare a review paper on the development of the science and technology in your respective country and your work.

Application Procedure and Deadline

Applications should be completed on the proper form, providing requested information and an academic CV. Completed applications should be submitted **to the addresses below by the deadline of 00.00 UTC on 16 April 2014:**

Dr. Simon Hodson, Executive Director, CODATA

E-mail: execdir@codata.org

Ms. LI Chang, CODATA-China Secretariat

E-mail: lichang@cnic.cn