International Council for Science (ICSU)

CODATA

Newsletter 87

Committee on Data for Science and Technology

19th International CODATA Conference
The Information Society: New Horizons for Science
Berlin, Germany – 7-10 November 2004

Virtually everything we do has been profoundly affected by the Information Revolution: How we travel, how we shop, how we communicate, how we do business. Computers, telecommunications and software have combined to change human existence in every way imaginable. Indeed the changes are so profound that two World Summits on Information Society are underway – one in Geneva 2003 and one in Tunis in 2005.

December 2003
Highlights

http://www.codata.org

The Committee on Data for Science and Technology (CODATA) was established in 1966 by the International Council for Science (ICSU). Working on an inter-disciplinary basis, CODATA seeks to improve the quality, reliability, management and accessibility of data of importance in all fields of science and technology.

Science is at the heart of this Information Revolution. The scientific advances of the twentieth century – in materials, electronics, physics, chemistry, applied mathematics and computer science – were fundamental in developing the technology needed to make the Information Revolution a reality. And in many ways, science today also reflects the impact the Information Revolution has had on science itself – how science is done, how scientific discoveries are made, how scientists work and collaborate.

CODATA 2004 is the first major international conference designed specifically to address all facets of how the Information Society is creating new and unprecedented horizons for science. **CODATA 2004** will take place on November 7 - 10, 2004, in Berlin, Germany. The Conference features keynotes talks, plenary lectures and contributed paper sessions that provide new and important insights about the Information Revolution and its impact on science.
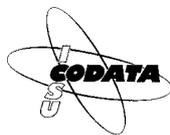
Conference Focus
Scientific data has always been the key to progress in science. Today every scientist must be familiar with, if not a master of, how to collect, manage, analyze and disseminate data using modern informatics tools. **CODATA 2004** is THE international conference that brings together the most exciting new developments in scientific data work, especially on a multi-disciplinary basis. **CODATA 2004** features sessions on advanced topics such as:

- Data archiving
- Data visualization
- Infoscience technology
- Mark-up languages for scientific information

The Information Revolution, however, has been more than technological advances. Indeed, the very soul of science has changed, forever broadening the horizon for scientific research.

The Information Society: New Horizons for Science

CODATA 2004 explores these broad new vistas for science with keynote and plenary presentations on subjects such as:

- Preserving cultural data as our heritage
- The future of the internet and science
- Scientific discovery and data preservation
- How data access impacts on health issues
- Scientific data and its role in disaster management
- Bridging the scientific digital divide
- Scientific data and society

In addition, **CODATA 2004** has a third set of sessions focusing on important issues that any scientist deeply involved in data work must address, including:

- Security and open scientific communications
- Privacy, ethical, legal and IPR issues
- Scientific data and distance learning
- Scientific data as a product
- Preserving the virtual world – what do we save when we model

CODATA 2004 also provides an important forum that explores multi-disciplinary uses of scientific data such as:

- Biodiversity data resources and integration
- Integrating and using geo-spatial data resources
- Materials information for modern design
- Virtual laboratories and data sharing

We invite you to read through this Newsletter to find out more about

the Call for Papers and general Conference Information. This information can also be consulted on our website http://www.codata.org and will be updated regularly.

We look forward to your participation at what promises to be a very exciting event.

Andreas Oberweis and John Rumble,
Co-Chairs of the International Scientific Program Committee 2004

The International Scientific Program Committee
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Conference Location

The 19th CODATA Conference takes place at the Hotel Steglitz International in Berlin, 7-10 November, 2004. As the largest conference hotel in South-West Berlin, the Hotel Steglitz International has 200 rooms and every room is fully equipped with mini bar and television. The Schlosspark Restaurant offers an extensive and varied menu and a large selection of wine. Furthermore the hotel cocktail bar serves light snacks. Should you choose to eat out, the hotel is conveniently situated next to one of the most attractive shopping boulevards in Berlin- the SchlossStraße. Here you will be able to find a number of small, casual and affordable restaurants. The SchlossStraße also has two shopping malls, a shopping forum and a large Galleria which offers a diverse selection of shops.
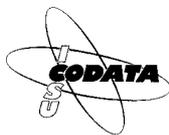

Hotel Conference Room

Within 25 minutes you will be able to reach both Shönenfelt and Berlin-Tegel airport. By car you can reach the hotel from the motorway via the exit "Steglitz", which brings you directly to the hotel. With access to the subway close by, it is very easy to access the city centre from the hotel.

For more information on the hotel see http://www.si-hotel.com and Berlin see http://www.berlin.de/english.

CALL FOR PAPERS

CODATA 2004 welcomes contributed papers on a wide scope of subjects related to scientific data. The conference continues the CODATA tradition of encouraging attendees to be active participants by including a variety of presentation formats such as oral talks, poster sessions, discussion sessions and panels, and demonstrations.

Contributions are welcomed for scientific data topics including, but not limited to:

- Basic concepts in scientific data
- Virtual laboratories and data management
- Knowledge discovery
- Database technology
- Data access and intellectual property rights (IPR)
- Data integration
- Visualization and graphics
- Data quality, validation and curation
- Data dissemination, including web technologies
- Interoperability and metadata standards
- Access to public data
- Virtual museums
- Infoscience and data science
- Knowledge management
- Data policy
- Cataloging data resources
- National and regional data activities
- Industrial data needs
- Use of data in societal decision-making

In addition, contributions are welcomed that address data work and issues in individual and multi-disciplinary fields such as:

- Biodiversity
- Molecular biology
- Drug design
- Biosafety
- Food science and agriculture
- Bioinformatics
- Earth and geo-sciences
- Virtual observatories
- Long-term observatories
- Global climate change
- Physical and chemical data
- Data for materials design
- Analytical instrumentation
- Environmental risk management
- Geothermal and gas hydrates
- Environmental data integration
- Energy research and resources
- Water resources
- Natural Disasters

Submission Format

Abstracts should include:

- Title of proposed paper
- Author(s) name, title, address, e-mail, phone, and fax
- Classification of the paper by one or more of the designated topics listed in the above Call for Papers. Talks on multi-disciplinary topics are encouraged.
- 200 to 400 word abstract in English
- Preference for oral presentation, poster presentation or technical demonstration

Preference is for abstracts submitted by e-mail in non-formatted text. Submissions should be contained in an e-mail message, NOT as an attached file. In the subject line of the message, place **CODATA 2004 - <your last name>**. All submissions should be sent to: **codata2004@dial.oleane.com**.

Abstracts will be accepted within 4-6 weeks after submission, and early submissions received before March 1, 2004, are considered for presentations in various plenary sessions.

→ FINAL Deadline is May 1, 2004 ←

CODATA PRIZE Award 2004

CODATA is delighted to announce the Call for Nominations for the CODATA 2004 Prize Award. This is a major biennial prize awarded by CODATA. It acknowledges outstanding achievement in the world of scientific and technical data (S&T). It recognizes work carried out in fields such as data management, data evaluation, data access issues, international cooperation, knowledge discovery, archiving or related subjects.

The prize-winner will be announced at the 19th International CODATA Conference in Berlin in November 2004 at a special awards ceremony. Former recipients of the award are:

- Dr. Barry Taylor of the National Institute of Standards and Technology (NIST), USA for his major contributions to the advancement of our understanding of the physical world through critically evaluated values of the fundamental physical constants

- Professor Arthur D. Pelton, Ecole Polytechnique, Montreal Canada. Professor Pelton is widely acknowledged as an innovative leader in the field of computational thermodynamics, as applied to metallurgical and chemical systems of interest in industrial and academic research.

The more information on the award and guidelines for submitting nominations please see http://www.codata.org

Alexei Gvishiani and SUN Honglie
Co-Chairs of the CODATA Prize Award 2004

The Sangster Award, fostering young scientist participation in CODATA

The Canadian National Committee for CODATA (CNC/CODATA) has announced the establishment of "The Sangster Award", made possible through the patronage of Dr. James Sangster, proprietor of Sangster Research Laboratories and a leader in the field of thermodynamic data. This award will enable a graduate student enrolled in a Canadian University to attend and present their work at the 19th CODATA International Conference, *The Information Society: New Horizons for Science*, 7-10 November 2004, Berlin, Germany.

This award will be offered biannually in conjunction with future CODATA International Conferences, in an effort to encourage young scientists and to support the goals and activities of CODATA, namely, to help foster and advance science and technology through developing and sharing knowledge about data and the activities that work with data. The successful recipient will receive up to a maximum of CAN $3000 (to cover the student registration fee and related travel and accommodation costs) and is expected to deliver either an oral or a poster presentation at the Conference. CNC/CODATA encourages other National Committees for CODATA to consider similar student incentives.

Application guidelines, award details and copies of the poster are available at http://www.codata.org/canada/sangster. The deadline for applications is 31 March 2004.