

SCIENTIFIC PROGRAM COMMITTEE

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LOCAL ORGANISING COMMITTEE

Chairperson: Paola Paoli

MEMBERS

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Franco Cecconi	Claudia Giorgi
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Massimo Di Vaira	Marcello Mellini
Cristina Dolfi	Davide M. Proserpio
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SCIENTIFIC SECRETARIAT

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GENERAL INFORMATION

LOCATION

The Conference will take place
at the Fortezza da Basso,
viale Strozzi, Florence, Italy

LANGUAGE

The official language of the Congress
will be English

HOTEL ACCOMMODATION AND SIGHTSEEING TOURS

Special rates in various Florence hotel categories
will be available for conference participants
as well as Pre and Post-conference tours.
Details and prices will be included in future announcements.

FURTHER INFORMATION

Newtours SpA

Via A. Righi, 8

50019 Loc. Osmannoro - Sesto F.no
Florence, Italy

Phone: +39 055 3361.1

Fax: +39 055 3361.350

E-mail: newtours@iucr2005.it

ADVANCED PROGRAM

The preliminary programme will be ready in Autumn 2004.

ORGANISING SECRETARIAT

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XX International Union of Crystallography Congress and General Assembly

Florence, 23-31 August 2005

www.iucr2005.it

The Unique International Importance of the World Congress of Crystallography (XX IUCr, Florence, Italy, August 23-31, 2005)

The General Assembly of the International Union of Crystallography in 1999 chose Florence as the host city for its XX Congress in 2005. The delegates were convinced by the organisation proposal and the excellent facilities available in Florence. The IUCr triennial Congress usually attracts more than 2500 participants from all over the world.

Crystallography is a multidisciplinary science that deals with the structural aspects of nature at the atomic level. The field boasts numerous Nobel prizes, including the 2003 laureate for chemistry, R. MacKinnon, who used this technique to investigate the structure of human cells. The achievement confirms that, without crystallography, the recent and revolutionary advances made in biochemistry and genomics would not have been possible.

The very prestigious scientific programme scheduled for the Florence congress will attract experts from all over the world. The conference topics will cover all the basic aspects of crystallography, specifically those based on mathematics, physics, chemistry, life science, pharmacology, mineralogy, material sciences, nanotechnology, computing, etc.

The discipline also involves high technological content with applications that are of great interest outside the academic world. For instance, X-ray diffraction is successfully applied by industry for quality controls. Vaccine and modern drug designs exploit the knowledge of spatial properties of protein and receptors to synthesise powerful and individually effective pharmaceuticals. The diagnostic capabilities of crystallography have become extremely important in the conservation of works of art, and even in the field of forensic investigation many difficult cases are solved thanks to crystallography. Moreover, the principles of symmetry, fundamental tools for any crystallographer, have inspired creative artists such as M.C. Escher, who drew the link between science and modern art. Since this trend continues nowadays, the congress will dedicate a special session to this topic.

The chairpersons of the XX IUCr Congress, Paola Paoli and Carlo Mealli, and all their colleagues in Florence are convinced that this is a unique opportunity for Italy and all of Europe to bring crystallography to the attention of a wide audience. The diffusion and extension of this field of science into the productive world have substantial effects on everyday life, and it is very important that everyone be aware of this.

PROGRAM

During the seven working days of the Congress there will be a total of 28 Keynote lectures and 97 microsymbiosia (on 7 parallel sessions). This raises the number of invited speakers close to 600 and more than 2000 posters are expected for presentation.

Some selected topics of interest are:

- Crystallography of biological molecules (Proteins, viruses, human cells and membranes, pharmaceuticals, etc.)
- Chemistry and crystallography (organic, inorganic, organometallic, main group compounds, homogeneous catalysis, etc.)
- Crystal engineering and supra-molecular compounds
- Crystallography in material science (superconductors, ceramics, battery and fuel cell materials, nanomaterials, non linear optical and electronic materials, etc.)
- Mineral crystallography and geosciences
- Surfaces and interfaces (heterogeneous catalysis, small angle scattering, micelles, magnetic properties of thin films, etc.)
- Fibre diffraction
- Charge, spin, momentum density
- Diffraction physics and optics
- Crystal growth
- Electron diffraction, Electron microscopy and characterization of materials
- Industrial crystallography
- Symmetry and topology
- Crystallographic teaching and databases