Reinforcing foundations
to build the 2nd century of modern crystallography

Pavia, 28 August - 6 September 2014

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Lectures *Tutorials* ***Poster sessions***
Hands-on experiments Dissemination
lectures Roundtables **Seminars**
Educational Book *ECTS credits*
Social programme and...

special events to celebrate the International Year of Crystallography 2014

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Mission

Modern crystallography is entering its 2nd century of life, being as vital and challenging as a young discipline. In the last decades, crystallography has experienced a rapid advance concerning the fundamental knowledge as well as the instrumentation and the automation of software and tools for structure solution, refinement and analysis. Such innovations have produced an enormous impact towards a deeper understanding of the structure and properties of matter and of the functionality of materials and molecular entities of all dimensions. Evidence for this can be found in a host of well-recognized novel findings.

On the other hand, automated techniques typically discourage critical thinking and constitute a serious risk for young crystallographers, who may lose the capability of evaluating the accuracy and goodness of data and critically analysing the results. This risk has been increased by the reduction of fundamental Academic courses in crystallography all over Europe.

The ECS1 is directed to young researchers and Ph.D. students involved in different fields of structural sciences, including physics, biology, chemistry, mineralogy, materials science, cultural heritage. It aims at diffusing and sharing the idea of crystallography as a unique discipline: "crystallography is an excellent example of the universality of science", to cite the Proclamation of 2014 as International Year of Crystallography. The School will provide the students with instruments for acquiring a deep know-how and a strong background on the fundamentals of crystallography. Students will also gain consciousness of progresses, limitations and perspectives of the crystallographic theories and methods, and of how they can be adapted to the different "flavours" of structural science, ranging from small molecule to large macromolecular assemblies. The fil-rouge of the multi-faceted methods to be delivered in this School is to provide students with fundamental interpretative and predictive information and ideas for further scientific developments.

Different facets of crystallography will be explored, and expectations for research in the next century discussed and analysed through a series of reviews from renowned teachers. Such contributions will be collected in the Educational Book associated to the School, with the aim of inspiring and suggesting ideas for novel research projects in crystallography.

Confirmed Lecturers so far

Vladislav Blatov
Samara State University, Russia

Gervais Chapuis
EPFL, Lausanne Switzerland

Carmelo Giacovazzo
CNR-Istituto di Cristallografia, Bari Italy

Cinzia Giannini
CNR-Istituto di Cristallografia, Bari Italy

Antonella Guagliardi
CNR-Istituto di Cristallografia, Como Italy

Victor Lamzin
EMBL, Hamburg Germany

Claude Lecomte
Université de Lorraine, Nancy France

J. Manuel Perez-Mato
Universidad del Pais Vasco, Bilbao Spain

Davide Proserpio
University of Milan, Italy

Venkatraman Ramakrishnan
Nobel Prize in Chemistry 2009
MRC Laboratory of Molecular Biology, Cambridge U.K.

Randy J. Read
Institute for Medical Research, Cambridge U.K.

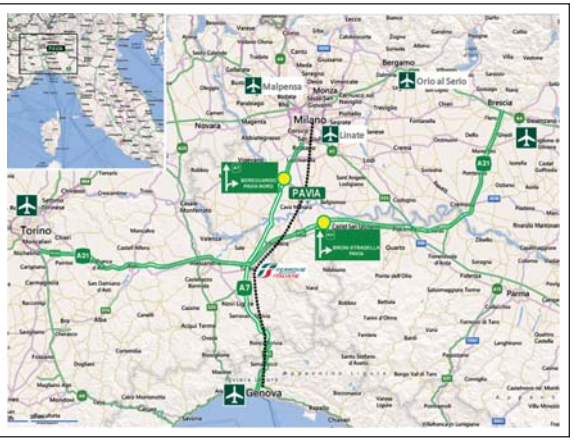
Thomas Schneider
EMBL, Hamburg Germany

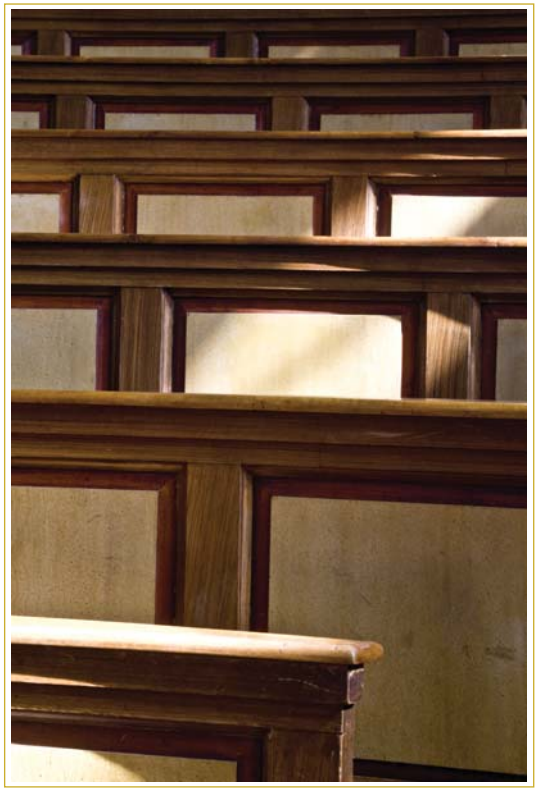
Consiglia Tedesco
University of Salerno, Italy

Giuseppe Zanotti
University of Padua, Italy

Pavia, a town distinguished for its excellence in teaching since medieval times, lies on the banks of the Ticino River, in the heart of the Lombard plain, looking out on the Apennines. The history of the University of Pavia goes back to 825, when the Emperor Lothair I founded a prestigious school of rhetoric. In 1361 the Studium Generale was established under decree of Emperor Charles IV, and was granted by Pope Bonifacio IX the same rights as the University of Bologna and the University of Paris.

Pavia is located about 30 kilometres south of Milan. It is easy to reach, being situated on the railway connecting Milan to Genoa and very close to the highways A7 Milan-Genoa and A21Turin-Piacenza.





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AIC Commission for Crystallographic Teaching
Michele Zema coordinator, Rita Berisio, Marco Milanesio, Anna Moliterni

Local working group University of Pavia
Claudia Binda, Marcella Bini, Doretta Capsoni, Paolo Ghigna, Vincenzo Massarotti, Andrea Mattevi, Giorgio Spinolo, Serena C. Tarantino

Patrizia Rossi University of Firenze **AIC Treasurer**

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International Union of Crystallography
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1st European Crystallography School

Pavia 28 Aug - 6 Sept 2014

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