



International AIC School on:

SCATTERING TECHNIQUES: FROM MICROSCOPIC TO ATOMIC STRUCTURES

Camerino, Italy

August 30th – September 4th 2009

First Circular



Scope of the School:

Properties of materials strongly depend on their structure. Diffraction techniques and Crystallography are traditionally recognized as the ideal nanoprobes to reconstruct and *"image"* the atomic arrangement of ordered systems. The advent of highly brilliant and coherent radiation sources along with advanced computational methods have widened new, appealing horizons of diffraction-related fields, traditionally considered as the *"world"* of other techniques. In fact, a growing attention has been devoted to the potential of hard X-Ray to image non periodic objects or to investigate, at different length scales, composite and supramolecular systems showing complex, hierarchical architectures.

The purpose of the School is to run a thread through different Scattering and Imaging Techniques, each able to investigate the structure of materials at different length scales, from the micro to the atomic level and beyond.

Basic theoretical principles will be treated for each technique and several fields of application will be presented: Chemistry, Physics, Material Science, Mineralogy, Biology and Medicine.

Main Topics:

Elastic Scattering from Matter
Light Scattering
X-Ray Small Angle and Wide Angle Scattering
Electron and Neutron Diffraction
X-Ray Tomography
Electron Microscopy
X-Ray Coherent Diffraction Microscopy
Microdiffraction / Total Scattering
Charge Density
Time Resolved Crystallography

Confirmed Speakers:

G. Margaritondo (EPFL, Lausanne)
M. Stampanoni (ETH, Zurich)
G. Croce (Università del Piemonte Orientale)
L. De Caro (IC-CNR, Bari)
F. Ferri (Università dell'Insubria, Como)
S. Galli (Università dell'Insubria, Como)
M. Gemmi (Università di Milano)
C. Giannini (IC-CNR, Bari)
A. Guagliardi (IC-CNR, Bari)
P. Macchi (University of Bern)
M. Milanesio (Università del Piemonte Orientale)
L. Vitagliano (IBB-CNR, Napoli)
M. Zema (Università di Pavia)

Organizing Committee:

A. Guagliardi (Chair)
P. Macchi (Treasurer)
S. Galli (Secretariat)
M. Milanesio (Webmaster)
C. Pettinari (Local Organizer)
F. Marchetti (Local Organizer)

Scientific Committee:

A. Guagliardi (Chair)
S. Galli
P. Macchi
M. Milanesio
L. Vitagliano
G. Zanotti
M. Zema