

SCHOOL ORGANIZATION

ORGANIZING LOCAL COMMITTEE

Luca Lutterotti, University of Trento
Alessandro Torboli, ItalStructures

TEACHERS

- Luca Lutterotti, University of Trento
- Mauro Bortolotti, University of Trento
- Ezio Petricci, Italstructures

TIMING, LOCATION AND VENUE

The school will be held at the Italstructures head quarter in Riva Del Garda (TN), Italy, Via M. Misone 11/d. Instructions for the venue are available in the Italstructures web site. The school will start October 12 at 9:00 am to end October 14 at 17:00. For few participants two additional days on 17-18 October will be dedicated to specific analyses (intermetallics, etc.) at the Trento University, Engineering Faculty.

PREREQUISITES

The school is intended as an advanced school focused on Rietveld refinements with the Maud program. The participant should already have a basic knowledge of the diffraction technique.

REGISTRATION

Subscription fee is 700 Euro. It includes all the school activities, the lunches and the PC use for the three days. Payment instruction will be mailed to You upon request. Due to limitation in the availability of PC for the practical session, the number of application accepted is limited.

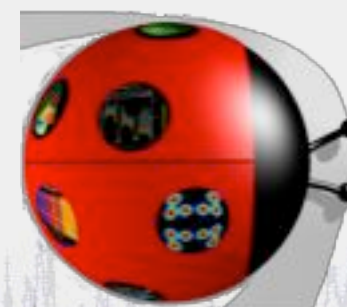
The registration can be done by contacting Italstructures:

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Ufficio Commerciale
Ital Structures s.r.l.
Via M. Misone 11/d
38066 Riva del Garda (TN)
Italy
Tel. (39) 0464-553426
Fax (39) 0464-555270
E-mail: <mailto:isinfo@italstructures.com>
Web: <http://www.italstructures.com>

OFFICIAL LANGUAGE

The official language of the school will be English but sessions in Italian can be done in case all participants will be confident with that language.

School on Rietveld analyses and the Maud program



Riva Del Garda (TN), Italy
October 12-14, 2005

Organized by





INTRODUCTION

This school is dedicated to learning the Rietveld refinement technique and the use of the Maud program. In addition to the classical Rietveld refinements the participant will be introduced to some of the advanced extensions of this technique and in particular to quantitative phase analysis, microstructural and texture (correction and analysis). The participants will also be instructed on the use of the program for ab-initio structure solution and how to optimize the measurement for the analysis and set the program for the available instrumentation.

STYLE OF THE WORKSHOP

The school will include theoretical lessons and practical demonstrations based on PCs (with Maud and necessary programs preinstalled) and instrumentation available at Italtstructures.

Each participant will have a PC to follow the Maud exercises.

A CD with the lessons, the exercises and a first version of the Maud manual will be available at the end.

TOPICS

- Introduction to the Maud program version 2.0 and Rietveld refinements.
- Rietveld refinement strategies with Maud.
- Quantitative phase and amorphous analysis.
- Size-strain and microstructural analysis.
- Ab-initio structure solutions with Maud.
- Structural refinements.
- Integration of Maud in the lab structure: databases, network and instrument setting.
- Advanced topics: texture and thin film analysis, order-disorder transitions and planar defects.

DETAILED PROGRAM

Wednesday October 12, 2005
 9:00 – Introduction to Rietveld refinements
 10:00 – Rietveld refinement collection strategies (practical session will follow)
 11:30 – Introduction to Maud vers. 2.0
 12:15 – Launch break

14:00 – Rietveld refinements with Maud: general principles and structural refinements
 15:30 – Practical session
 17:00 – End of the session

Thursday October 13, 2005
 9:00 – Rietveld quantitative analyses
 10:00 – Practical session on quantitative analyses
 11:00 – Analysis of crystallinity with the Maud program (and practical exercise)
 12:15 – Launch break
 14:00 – Size-strain analyses: isotropic, anisotropic broadening, fitting by distributions.
 15:30 – Practical session with Maud
 17:00 – End of the session

Friday October 14, 2005
 9:00 – Ab-initio structure solution: general procedure and resources in Maud
 10:00 – Practical session on a complete structure solution and refinement
 11:30 – The use of databases with Maud and input/output formats
 12:15 – Launch break
 14:00 – Texture, layered materials and thin films, compositional analyses
 15:30 – Practical session
 17:00 – Official end of the school

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