

## REGISTRATION FEES

	Until 31/05/2013	After 01/06/2013
<b>Student</b>	400 €	500 €
<b>Academic</b>	750 €	900 €
<b>Industrial</b>	750 €	900 €

VAT is not included in the indicated fees (19,6%)

In order to ensure and encourage interactions, the number of attendees is limited to 30.

### Registration fees includes:

Admission, participation to courses & Coffee breaks, lunches, reception and conference dinners

**To register or if you have any other questions about the training, please contact Inel at**

 **+33(0)2 3880 4545**  
 **+33(0)2 3880 0814**  
 **m.gaspari@inel.fr**

*Attendees are required to make their own accommodation and travel arrangements. A list of hotels and an access map are available on request.*

## GENERAL INFORMATION

### Venue

The workshop will take place in Caen, France in the IUT, UCBN, CRISMAT ENSICAEN facilities

### Access

Caen is located in Normandy at 250 km west of Paris. More details are available in the registration form.

### Organizers



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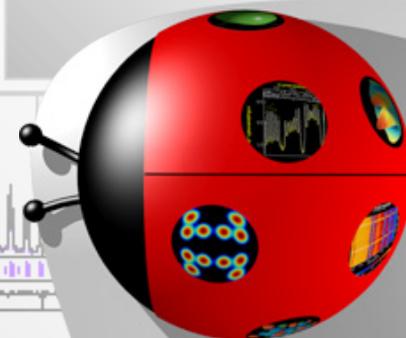
## WORKSHOP

### Combined Analysis Using X-ray and Neutron Scattering

July 8 - 12, 2013  
Caen (France)

*5 days training on the aspect of Combined Analysis by X-ray and Neutron Scattering and introduction to the MAUD software*

 Cell unit



## OBJECTIVES

The objectives of this workshop is to provide students and researchers (academic or not) the required knowledge to characterize structure, microstructure, phase, texture, stress and reflectivity by "Combined Analysis using X-ray and neutron scattering techniques". This will be treated from several case samples including: thin films and bulk materials, anisotropic and/or polyphased materials, nanomaterials, diverse experimental arrangements including multi-detectors, etc.

Each type of analysis will be considered individually and then integrated into the combined analysis software MAUD. Some specific examples will be studied using X-ray and neutron experimental data. Full afternoons are dedicated to training.

To support the theory and add a practical dimension to this workshop, technical aspects will be demonstrated on CRISMAT laboratory and INEL X-ray instruments.

This workshop is the best opportunity to come and meet people from various fields and exchange on technical interests and experiences.

## TOPICS

The workshop will cover many aspects of "Combined Analysis" by X-ray and neutron scattering, ranging from fundamental requirements to technically relevant industrial and academic applications.

- Diffraction technique, an overview
- Crystallographic Texture Analysis
- Residual Stress Analysis
- Rietveld analysis
- Reflectivity analysis
- Phase analysis
- Line broadening analysis
- The combined solution
- The MAUD software

## PRE-REQUISITES

Necessary pre-requisites:

- Basic knowledge of crystallography and diffraction techniques
- Good practice in the use of computers
- If possible, bring your laptop for the practical sessions



MAUD  
Materials Analysis  
Using Diffraction  
<http://www.ing.unitn.it/~maud/>

Previous Workshops:

<http://www.ecole.ensicaen.fr/~chateign/formation/>

## REGISTRATIONS

You are interested in this workshop?

Please email INEL with subject

«MAUD workshop»

at [m.gaspari@inel.fr](mailto:m.gaspari@inel.fr)

or give us a call

at +33(0)2 3880 4545

**Registration deadline**  
**15/06/2013**

## SPEAKERS

Daniel Chateigner, Caen (France)

Luca Lutterotti, Trento (Italia)

Christophe Fontugne, Artenay (France)

Magali Morales, Caen (France)

