## **Registration fees**

	Until May 20 <sup>th</sup> , 2020	After May 20 <sup>th</sup> , 2020
Student	900€	1100€
Academic	1600€	1800€
Industrial	2000€	2200€

All taxes included (20% VAT)

In order to ensure and encourage interactions, the number of attendees is **limited to 20**.

### Registration fees include

Admission, participation to courses & Coffee breaks, lunches & conference dinner

# Any questions about the training, please use:

Phone: +33(0)2 31 45 26 11 +33(0)2 31 45 26 28

daniel.chateigner@ensicaen.fr stephanie.gascoin@ensicaen.fr

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Attendees are required to make their own accommodation and travel arrangements. A list of hotels and an access map will be sent

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# **General information**

#### Venue

The workshop will take place in Caen, France at the Technological Institute an CRISMAT-ENSICAEN facilities

#### Access

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

### Organizers



# CRISMAT UMR 6508 Organizes the 11<sup>th</sup> WORKSHOP on Combined Analysis Using Ray Scattering

# July 5<sup>th</sup> – 9<sup>th</sup>, 2021 Caen (France)

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

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### **Objectives**

This international school covers many aspects of the "Combined Analysis" methodology using x-Ray, neutron and electron scattering, and X-ray fluorescence applied to material science. Fundamental to technical aspects relevant to industrial and academic applications are targeted. The combined analysis method is developed for more than 20 years. Ground on the whole pattern fitting using the Rietveld method, it incorporates texture, microstructure, phase, layering, residual stress analyses,, together with x-ray reflectivity and fluorescence and electron

The aim is to give students, academic and non-academic researchers the necessary tools to be able to characterize their own samples using the Combined Analysis method and the software MAUD. The characterization involves obtaining information on the structure, microstructure, phase and elemental content, texture, stress in different kind of samples and structures including : thin films, bulk anisotropic materials. materials. polyphased materials, nano-materials, etc.

diffraction.

900

800

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The objective is to bring together participants from various fields and to provide an opportunity to discuss individual interests and experience. 1.0.0

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## **Topics**

- Each type of analysis will be considered individually for the proper technique and then integrated into the MAUD Combined Analysis software. Some specific examples will be studied using X-Ray and neutron experimental data.
  - Diffraction techniques, overview
  - Crystallographic Texture Analysis
    - Residual Stress Analysis
      - · Rietveld analysis
      - Reflectivity analysis
        - · Phase analysis
    - Line broadening analysis
  - XRD & XRF combined analysis

## **Registration Links**

French https://www.azurcolloque.fr/DR19/inscription/inscription/55/fr

English : https://www.azurcolloque.fr/DR19/inscription/inscription/55

## **Registration deadline**

June, 20<sup>th</sup>, 2021

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## **Pre-requisites**

- Basic knowledge of crystallography and diffraction techniques
- · Good practice in the use of computers
  - Your laptop for the practicals !

#### MAUD

Materials Analysis Using Diffraction http://maud.radiographema.eu/

## **Speakers**

Daniel Chateigner, Caen (France) Luca Lutterotti, Trento (Italia) Henry Pillière, Artenay (France)



## **Informations Link**

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