X-ray Scattering and Diffraction Techniques for Materials Characterization

**Scientific Organisation**
Institute of Crystallography – CNR, Bari, Italy
IVODENT Academy
Association of Albanian Crystallographers

**Workshop Chairs**
Prof. Asoc. Dr. Bujar Dida
President of AAC
Dr. Altin Mele
Center of Techniques Studies, Ivodent Academy

**Participants in the Workshop**
Undergraduate or graduate students and young researchers with interests in characterization of powders or colloid nanoparticles

**Day 1**
Structure solution process by X-Ray Powder Diffraction Data (XRDP)
Lecture: Nicola Corriero - 9:00 – 11:00

Coffee break - 11:00 – 11:15

Small Angle X-ray Scattering (SAXS) for the study of nano- and biomaterials
Lecture: Dritan Siliqi - 11:15 – 13:15

Lunch break - 13:15 – 15:00

**Practical Session 1** - 15:00 – 17:00
Group A: XRPD software, EXPO and structure solution
Tutor: Nicola Corriero

Group B: SAXS software, ATLAS/SasView and colloidal solutions (from macromolecules to nanoparticles)
Tutor: Dritan Siliqi

**Day 2**

**Practical Session 2** - 09:00 – 11:00
Group A: SAXS software, ATLAS/SasView and colloidal solutions (from macromolecules to nanoparticles)
Tutor: Dritan Siliqi

Group B: XRPD software, EXPO and structure solution
Tutor: Nicola Corriero

Coffee break - 11:00 – 11:10

**Practical Session 3** - 11:15 – 13:15
Group A: XRPD software, QUALX and qualitative/semi-quantitative data analysis
Tutor: Nicola Corriero

Group B: SAXS software, SunBIM and X-ray imaging
Tutor: Dritan Siliqi

Lunch break - 13:15 – 15:00

**Practical Session 4** - 15.00 – 17.00
Group A: SAXS software, SunBIM and X-ray imaging
Tutor: Dritan Siliqi

Group B: XRPD software, QUALX and qualitative/semi-quantitative data analysis
Tutor: Nicola Corriero

Software for the practical sessions: EXPO, Qualx2, SunBIM, SasView and ATLAS package
All the software can be download after a valid registration and are free of charge for the academic users