# SEMINAIRE ISMO


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## "Recent developments in the synchrotron study of materials from cultural heritage, archaeology and palaeontology"

Ancient materials from cultural heritage, archaeology and palaeontology are often highly heterogeneous and chemically complex due to the raw materials used, the manufacturing techniques employed to produce artefacts and materials long-term alteration. Synchrotron-based X-ray and infrared spectroscopy and imaging are powerful tools to study the composition, speciation, structure and morphology of ancient materials both at high spatial and spectral resolutions.

We will present recent works carried out at IPANEMA on the synchrotron X-ray and UV/visible luminescence study of artists' materials from musical instruments and paintings. Using an adapted setup at the DISCO beamline of SOLEIL, high contrast spectral images could be collected at spatial resolutions 10 to 20x greater than with usual synchrotron FT-IR measurements to better understand manufacturing techniques and long-term alteration. New imaging approaches were also developed to collect morphological and palaeo-environmental information on specimens from Natural history collections with the DIFFABS beamline.

In the context of the future European Research Infrastructure on Heritage Science (ERIHS) which will have one of its centers in Paris, IPANEMA has thrived.

**Mardi 3 novembre 2015 à 11h**
**Bât 210 – Amphi 1 (2ème étage)**
**Université Paris-Sud - 91405 ORSAY Cedex**