



Contribution ID: 63

Type: **Invited talk**

Keynote Speech #4: Neutron and historical steel artefacts: a metrological and historical-technological overview

Wednesday, November 22, 2023 3:55 PM (35 minutes)

The combination of Neutron Imaging, Neutron Diffraction and Bragg Edge Neutron Transmission is probably the most effective non-invasive method able to fully characterize, in a quantitative way, composition and microstructure of ferrous historical artefacts. In order to obtain reliable results, the calibration of neutron data taken on reference carbon steel standard samples was performed, using the three techniques and verifying the correct parameterization of phase and microstructure analysis. Steel samples from different historical periods and cultures were then analyzed, allowing us to determine their manufacturing process and learn the technological choices behind their specific usage as tools or weapons.

Presenter: GRAZZI, Francesco

Session Classification: Object Studies