



Tarragona, Spain  
4th-7th October, 2021

Multi-scalar Characterization of Raw Materials

## Session 13: 'New methodologies for the study of prehistoric tools'

Juan José Ibáñez<sup>1</sup>, Niccolò Mazzucco<sup>2</sup>, Cristina Lemorini<sup>3</sup>, Hermine Xhaufclair<sup>1</sup>, Isabella Caricola<sup>4</sup>, Fiona Pichon<sup>5</sup>, Juan F. Gibaja<sup>6</sup>

*1 Institució Milà i Fontanals, IMF-CSIC, 2 Pisa University, 3 Sapienza University, 4 Newcastle University, 5 UMR 5133-Archéorient, CNRS, 6 Escuela Española de Historia y Arqueología en Roma, EEHAR-CSIC*

[ibanezjj@imf.csic.es](mailto:ibanezjj@imf.csic.es); [nmazzucco@imf.csic.es](mailto:nmazzucco@imf.csic.es); [cristina.lemorini@uniroma1.it](mailto:cristina.lemorini@uniroma1.it);

[hermine.xhaufclair@imf.csic.es](mailto:hermine.xhaufclair@imf.csic.es); [isabella.caricola@ncl.ac.uk](mailto:isabella.caricola@ncl.ac.uk); [fiona.pichon@gmail.com](mailto:fiona.pichon@gmail.com);

[jfgibaja@imf.csic.es](mailto:jfgibaja@imf.csic.es)

Almost one century ago, S.A. Semenov's research promoted a renewed approach to Prehistoric tools. His aim was the analysis of tool function as a way to unveil the characteristics of past societies. Since then, functional studies have been constantly improved thanks to the contribution of numerous specialists and the incorporation of new experimentations and means of observation of use-wear traces and residues. During the last decade, the emergence of new methodologies for the analysis of use-wear traces and residues, based on quantitative methods (i.e. 3D surface analysis, chemical analysis like XRF, FTIR, EDX, ...), is opening new opportunities for a better identification of tool function. First trials for the study of archaeological tools are offering promising results. Moreover, the application of two or more independent approaches contributes, in this last decade, to consolidate the scientific premise of the functional analysis.

In this session, we will deal with the new methodologies that are used in order to understand all aspects related to Prehistoric tools. We are interested in the identification of Prehistoric tool use (e.g. stone, bone, metal, pottery), but without forgetting other key aspects, as hafting systems, the impact of post depositional alterations, indications of transport and all questions that could provide us a better understanding of how Prehistoric groups produced and used technologies for fulfilling their economic, social and symbolic need.