## The Pre-Roman Iron Age in Central Europe: New Research Perspectives

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## Abstract:

The Pre-Roman Iron Age in Central Europe represents one of the most dynamic and multifaceted periods in the region's prehistory. Rapid social transformations, increasing mobility, and the intensification of long-distance interactions require research approaches that bridge traditional archaeological enquiry with scientific and technological methodologies. This session aims to present recent findings and develop new interpretative frameworks grounded in interdisciplinary and archaeometric perspectives.

A central focus is placed on the archaeometry of pottery, a key source for understanding technological choices, cultural traditions, and communication networks. Mineralogical and petrographic analyses (e.g., PLM, SEM-EDS), chemical composition studies (pXRF, ICP-MS), reconstructions of firing regimes, and assessments of forming techniques and tempers enable the identification of production zones, the detection of specialised workshops, and the tracing of distribution pathways. Such integrated approaches contribute to reconstructing chaînes opératoires and offer insights into the organisation of craft production, regional interaction, and the movement of ideas and practices.

Beyond ceramic studies, the session encompasses bioarchaeological and paleoenvironmental research, isotope-based and genomic investigations of human mobility, geochemical analyses of raw materials, and refined radiocarbon-based chronological modelling. The integration of remote sensing, GIS, and 3D modelling further enhances the reconstruction of settlement systems and cultural landscapes. These methods collectively broaden our understanding of technological innovation, social organisation, ritual behaviour, and regional connectivity during the Pre-Roman Iron Age.

By bringing together specialists across disciplines, the session seeks to stimulate dialogue, highlight methodological advances, and promote the development of multi-scalar interpretative frameworks. Interdisciplinary and archaeometric approaches are essential for generating more nuanced and evidence-based narratives and for deepening our

understanding of the complexity and diversity of Central European communities on the eve of the historical era.