



2020 IMEKO TC-4 INTERNATIONAL CONFERENCE ON

METROLOGY FOR ARCHAEOLOGY AND CULTURAL HERITAGE

TRENTO, ITALY | OCTOBER 22-24, 2020

CALL FOR PAPERS *for the Special Session on* DENDROCHRONOLOGY FOR CULTURAL HERITAGE

ABSTRACT

Under certain conditions, man-made wooden artefacts can survive over millennia and provide valuable information for sciences and humanities. Precise dendrochronological dating (Italian standard UNI 11141, 2004), based on the study of tree-ring pattern variations over time, represents the only dating method with annual to sub-annual resolution. Hence, it offers important contributions to chronological questions in archaeology and historical cultural heritage. The surfaces of wooden objects enable to reconstruct woodworking processes and to study technological development in the past. Tree-ring based environmental reconstructions allow a better understanding of former living conditions and to critically assess environmental impacts on economy and societies. The aim of this special session is discussing specific cases, potential and limitations and the future of dendroarchaeological research.

ABOUT THE ORGANIZERS

Mauro Bernabei is researcher at the National Research Council – Institute of BioEconomy (CNR-IBE) from 1998 Head of the Laboratory of Dendrochronology of the CNR-IBE. His research activity is focused on wood dating, mainly through the dendrochronological technique but also joining dendrochronology with other dating methodologies like radiocarbon, chemical investigations and spectrometric analysis. Other research fields involve wood anatomy, mainly through the identification of species on wood and charcoal, the study of archaeological wood and the state of conservation on wooden artefacts.

Nicoletta Martinelli is professional dendroarchaeologist at the Laboratory Dendrodata in Verona since 1991; adjunct professor in Dendrochronology at the University of Verona from 2005 to 2011; Haury Visiting Scholar at the LTRR (Laboratory for Tree Ring Research) at the University of Arizona in 2017. Expert in dendrochronological investigations on cultural heritage contexts and Bayesian modelling on radiocarbon dates from woods, her research is focused mainly on archaeological excavations and pile-dwelling villages; member of the Italian UNESCO working group for the site "Prehistoric pile-dwellings around the Alps", is author of the oak chronologies for Bronze Age and Early medieval times for Northern Italy.

Willy Tegel is dendrochronologist at the Archaeological Service of Canton Thurgau (CH) and Chair of Forest Growth and Dendroecology, University of Freiburg. His research activities cover all fields of dendrochronology. From environmental reconstructions to dating archaeological and historical wood constructions.

Jarno Bontadi is wood technologist at the National Research Council – Institute of BioEconomy (CNR-IBE). Since 2008 he has experienced in the fields of dendrochronology, wood anatomy, thermal modification of wood and hygro-mechanical behaviour of wooden panel paintings.

Bernhard Muigg is Medieval Archaeologist and building researcher associated with the Chair of Forest History, University of Freiburg and dendrochronologist at the Archaeological Service of Canton Thurgau (CH). His expertise covers woodland and building history of the Common Era as well as dendroarchaeology of the various prehistoric epochs.

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