

**Session SD12 - Information Technology Applications in Seismology**  
**Poster presentation**

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**SD12/P4/ID19 - The IT framework of the European Archive of Historical Earthquake Data (AHEAD)**

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The European Archive of Historical Earthquake Data (AHEAD) has been developed in the frame of the EC project NERIES and maintained in the frame of the EC project SHARE. AHEAD makes available on the web the result of a networked historical earthquake data research, formalised in terms of studies (papers, reports, macroseismic data points, etc). It provides an updated wealth of data that are unique for many European events in the time-window 1000-1963. A series of IT solutions have been developed in order to support both the research and the networking activities carried out within the building process of AHEAD. The resulting framework is an equally balanced effort in both the back-end and front-end design and implementation, a key feature in a research approach very much human-centred, where the quantity of data is small if compared to terabytes of instrumental data. AHEAD is composed of five mutually dependent data-components: 1) the “Digital Library”, where all the historical earthquake studies are stored and described by bibliographical metadata, 2) the “Consensus Earthquake Inventory”, where the relevant macroseismic data (event date, epicentral area, number of macroseismic data-point, maximum observed intensity) are extrapolated, the best available information are selected and fake earthquakes are highlighted, 3) the “European Macroseismic Database”, where all the available macroseismic data-points (MDPs) are stored, 4) the “Parameters Laboratory”, where earthquakes parameterisation methods are applied to MDPs in order to obtain epicentral locations and magnitudes and 5) the “European Earthquake Catalogue”. The presentation will demonstrate the adopted IT solutions separately for the back-end and the front-end, both for the access-restricted website and the general-purpose implementation designed to be included in the “Earthquake Data Portal”, developed within the EC project NERIES, which targets a much broader scientific community.

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