

## International Meeting

# Beneath the Surface

### Ancient Human Agency in the Subterranean World

<https://chauvet.sciencesconf.org/>

2-4 July 2025, Vallon-Pont-d'Arc (France)

This international scientific meeting is being organized as part of the 30th anniversary of the discovery of Chauvet cave (1994-2024). It will take place from July 2 to July 4, 2025, at the conference center of the facsimile of Chauvet cave, in Vallon-Pont-d'Arc (Ardèche, France).

**The meeting aims to promote interdisciplinary and integrated studies of prehistoric caves, encompassing a comprehensive definition of such environments.**

In the past few decades, significant theoretical and methodological advancements have emerged, driven by new discoveries and lively debate. We anticipate that this meeting will provide an opportunity to assess progress, stimulate reflection, explore new paradigms, and open up new avenues of research.

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# 1 Background

Paleolithic hunter-gatherer communities not only transformed the subterranean environment (through activities such as creating cave art, establishing settlements, or using fire, etc.), but they were also shaped by it. They adapted their movements, their sensory perceptions (sight, hearing) and their spatial awareness to navigate this unique environments, characterized by the interactions it imposes – both among humans and with animals, including large predators such as wolves and cave bears. Consequently, caves provide complex archaeological and paleontological records, where diverse agents interact and multiple temporal layers converge.

The discovery of Chauvet cave in 1994 (Ardèche, France) radically changed our understanding of Paleolithic art and reshaped our approach to decorated caves. **The 30th anniversary of this discovery is therefore an opportunity to bring the scientific community together, fostering dialogue to exchange points of view and approaches in studying the prehistoric occupation of the subterranean world.**

## 2 Call for Abstracts

Scientific contributions will be presented as contributed lectures and poster presentations. **The deadline for abstract submissions is February 15, 2025.** Participants will be notified by March 1, 2025 if their abstracts are accepted for a presentation or poster.

Abstracts must be written in English and must not exceed 500 words. They must be submitted on the conference website: <https://chauvet.sciencesconf.org/>.

## 3 Conference Registration

Conference registration opens online February 15, 2025 at the conference website: <https://chauvet.sciencesconf.org/>. There will be an early bird registration fee of 150 EUR (100 EUR for students) and a standard registration fee of 200 EUR (150 EUR for students). In order to qualify for the early bird all completed registration forms and fees should be received by April 30. The standard registration deadline is June 30.

The registration fees include admission to the full conference, coffee breaks, lunches and dinners (dinners on July 2 and 3 only), all served at the conference venue.

## 4 Travel Information

Vallon-Pont-d'Arc can be reached by bus from the Valence and Montélimar train stations. The bus leaves Valence TGV station every day at 10.25am, 2.15pm and 5.30pm (approx. 1h30 travel time). If you are coming by plane, we recommend you arrive in Marseille. From there, we will organize a free shuttle bus to take you directly to Vallon-Pont-d'Arc.

## 5 Accommodation

We have reserved a block of rooms in a vacation village in Vallon-Pont-d'Arc at a preferential rate. From there, a free shuttle bus will take you to the conference venue every day.

A web portal will be opened in February to enable you to book and pay for your accommodation. Please note that the conference will take place at the beginning of the tourist season, so we recommend that you make your reservations as soon as possible.

## 6 Conference Topics

### 6.1 Anthropization of the Subterranean Environment

For prehistoric societies, the subterranean world was an extension of their surface territories, as early as the first phases of prehistory. In addition to the occupation of the entrance of caves, and in parallel with the graphic expressions that are the subject of particular attention in prehistory, the archaeological record is rich with evidence of occupation and activity in deeper underground environment by human groups, whether as a collective or individual behavior. These remains (e.g. dry-stone structures, broken concretions, hearths, mouchages, ichnites, extraction of raw materials, manuports, burials, etc.), reflect different perceptions and appropriations of this very special environment.

Recent discoveries, multidisciplinary and multi-proxy approaches, combined with the development of new methodologies, have advanced our knowledge and raised new questions about the relationship between humans and the subterranean world. This session will look at the diversity of prehistoric human behaviors, from those that can be studied through the recognition of faint traces to those that have led to transformative changes of the underground landscape.

**Keywords:** (deep) karst; paleospeleology; pyrotechnology; speleofacts.

### 6.2 Technical Knowledge and Worldview through Rock Art

Chauvet cave is a pivotal reference for interpreting Paleolithic art, revolutionizing our paradigms and our descriptive approach to graphic expressions of this period in human history. It is now crucial to deepen our understanding of the technical skills (engraving, pigment use, material characterization, etc.) and cognitive abilities (mental schemas, psychology of form, etc.) involved in the act of drawing. This knowledge is essential for guiding analytical results toward meaningful interpretation.

Investigating the *how?* and the *why?* will enable the exploration of human agency through symbolic gestures in subterranean environments, as well as the interactive relationships between humans and non-humans. Within this unusual setting, it is necessary to identify the way in which these human groups organized their thinking within a network of relationships including all animate creatures (human and non-

human). This comprehensive and comparative approach aims to evaluate and propose dynamic networks that shaped the worldview of indigenous societies.

**Keywords:** engraved drawing; painting; pigment; graphic composition; interpretation; 3D imaging; archaeometry.

### **6.3 Paleocology and Anthropolozology**

The subterranean environment of Chauvet Cave contains a wide range of features relating to human and animal activity, both past and present. The remnants of their activities on the ground or on the walls, as well as the composition of the faunal spectra and taphonomic processes, reflect alternating visits by different communities or interactions, whether trophic or symbolic.

The aim of this session is to provide an opportunity for multidisciplinary exchange and discussion, covering prehistory and more recent periods, anthropology and the ecology of modern large mammals, in relation to the underground environment and its implications for understanding Paleolithic worlds. Based on original observations in the field, studies of museum collections, and methodological developments, contributions are expected that provide a cross-cutting view of the use of the subterranean environment.

**Keywords:** archaeozoology; human-animal interactions; paleontology; taphonomy; traceology.

### **6.4 Caves as Memories of Past and Recent Changes**

Reconstructing archaeological sites as they appeared when visited in the past, in order to gain a better understanding of their landscape dimensions, their specific physical features, potential obstacles to progress, etc. is an increasingly important focus in current research on underground environments. This work of reconstructing past landscapes relies on the study of underground morphologies and deposits on the walls and on the ground, and reflects the evolution of the cave over time. This evolution is largely controlled by external and environmental parameters (hydraulic gradient, climate, vegetation cover, etc.). In this context, caves are genuine archives of the evolution of past and recent environments, and play a crucial role in preserving and recording them over time.

The study of these subterranean memories in conjunction with animal and human traces enables us to reconstruct the different stages in the evolution of the subterranean landscape before, during, and after the periods of frequentation, while linking them to the specific features of the relief and the external environment. The integrated interpretation of the cave now enables us to look closely at the specific features of the outdoor and underground landscapes over time, and to examine the state of the cave walls and floors at the time they were visited.

Presenting the results obtained from underground archives, methodological developments and current challenges will be central to this session. Particular attention will

be paid to the conditions of access to caves, to the reconstruction of underground landscapes at the time they were visited, and to the definition of landscape changes since prehistoric times.

**Keywords:** geomorphology; paleoclimatology; paleoenvironment; hydrology.

## **6.5 Chronologies and Bio-Events in Underground Environments**

This session will explore the complex chronologies characterizing Paleolithic caves. Sedimentary fillings, like painted walls, constitute palimpsests, shaped over time by taphonomic processes. How, then, can we approach the temporality of ancient human activities and animal visits to caves? How can we reconstruct chronologies with precision and resolution that can effectively distinguish between competing archaeological or paleontological hypotheses?

Presentations will feature case studies, (macro-)regional studies, methodological issues or critical reviews. This session aims to foster interdisciplinary discussions on dating techniques ( $^{14}\text{C}$ , U-Th, OSL, cosmogenics...), methodological advancements, statistical analysis, and data interpretations to provide insights into cave chronologies and ecosystem dynamics.

**Keywords:** absolute and relative dating; chronological modelling; geochronology; palimpsest.

The Conference is organized by the scientific research team of Chauvet cave.

