

OFFERS

2 postdoctoral full time positions (2015-2016)

(Submission deadline: November 15th 2014)

We would like to recruit **two Postdoctoral Researchers** (one in Geometric Modeling, Computing & Mathematics and one in Classical Archaeology and Ancient History) to join our research on the development of **innovative methodologies** for the **semantic interpretation of digitized forms of heritage artefacts**, their **classification and analysis**. Obviously, even if clearly distinct in their academic profile and planned work, these two post-doctoral fellows will interact throughout the duration of the project. By **combining, evaluating and comparing** the **languages** of the archaeologist, the mathematician, the chemist and the architect, the aim is the definition of a new **common language** to these four disciplines, with an **epistemological perspective** and heritage shared – the 3D virtual restitution of major world heritage monuments, including their surface treatment (plating, colors). To this end, the project is focused on the **study of two ancient monuments** selected for their historical importance, the quality of available remains to study and the scientific and economic issues they raise: the **Tholos in Delphi (Greece)**; the **Attis Temple in Zama Regia (Tunisia)**.

Postdoctoral position 1 (f/m) in Geometric Modeling, Computing & Mathematics

Institute: Laboratoire LSIS (Laboratoire des Sciences de l'Information et des Systèmes, UMR 7296 - CNRS/AMU / <http://www.lsis.org>), Marseille, France.

Supervisor: Pr. Marc Daniel (marc.daniel@univ-amu.fr)

In collaboration with the Laboratoire MAP (Livio de Luca, Dr. CNRS, Modèles et simulations pour l'Architecture et le Patrimoine, UMR 3495 - CNRS/MCC / <http://www.map.archi.fr>), Marseille, France.

Partner: Centre Camille Jullian (Histoire et archéologie de la Méditerranée et de l'Afrique du Nord, de la protohistoire à la fin de l'Antiquité, UMR 7299 - AMU/CNRS/MCC), Aix-en-Provence, France.

The LSIS laboratory currently offers a Postdoctoral position (f/m) for a researcher specialized in **Geometric Modeling, Computing & Mathematics**. This postdoctoral position is located in LSIS, a National Scientific Research Center located in Marseille within the G-Mod team (<http://www.lsis.org/gmod>).

Your profile: Under the responsibility of LSIS and in collaboration with the MAP, you will address the problem of digitizing sculpture, the search for relevant shape analysis descriptors and the automatic extraction of relevant semantic features from the calculation of these descriptors. You will have good skills in mathematics and computing and more specifically in geometric modeling. Being open in multi-disciplinarily work dealing with cultural heritage and documentation will be highly appreciated.

Please submit your enquiries and application to **Pr. Marc Daniel** (marc.daniel@univ-amu.fr), with copy to **Pr. Philippe Jockey** (philippe.jockey@univ-amu.fr) and **Dr. Livio de Luca** (livio.deluca@map.cnrs.fr).

Postdoctoral position 2 (f/m) in Classical Archaeology and Ancient History

Institute: Centre Camille Jullian (Histoire et archéologie de la Méditerranée et de l'Afrique du Nord, de la protohistoire à la fin de l'Antiquité, CCJ, UMR 7299, AMU/CNRS/MCC), Aix-en-Provence, France / <http://ccj.cnrs.fr>).

Supervisor: Pr. Philippe Jockey, philippe.jockey@univ-amu.fr.

In collaboration with the **Laboratoire MAP** (Livio de Luca, Dr. CNRS, Modèles et simulations pour l'Architecture et le Patrimoine, UMR 3495 - CNRS/MCC 3495), Marseille, France.

Partner: Laboratoire LSIS (Laboratoire des Sciences de l'Information et des Systèmes, UMR 7296 - CNRS/AMU), Marseille, France.

The Centre Camille Jullian currently offers a Postdoctoral position (f/m) for a researcher specialized in Classical Archaeology and Ancient History (CAAH), coupled with 3D Digital heritage competence. This postdoctoral position is located in the Centre Camille Jullian, a National Scientific Research Center located in Aix-en-Provence and dedicated to the study of Mediterranean and North Africa Antiquity.

Your profile: The ideal postdoc candidate, specialized in Classical Archaeology and Ancient History (CAAH) and showing a particular interest in Ancient Greek and Roman polychromy, especially on sculpture and architecture, should have also a high sensitivity to digital technologies and possibly skills in these latter areas. Basic knowledge of them is advantageous. He / her will contribute both to the elaboration of a common scientific language between the different partners and to the 3D digital restitution of the monuments selected, including their original polychromy.

Our offer for both 2 postdoctoral full time positions

Starting date: The project Eloquenzior has been funded and it is possible to recruit quickly the postdoctoral assuming the overhead due to the administration procedures.

Location:

Postdoc 1: *Marseille, Luminy, France.*

Postdoc 2: *Aix-en-Provence, France.*

Duration: each contract will be signed for one **year**, but with the **possibility to extend it another year** in continuity.

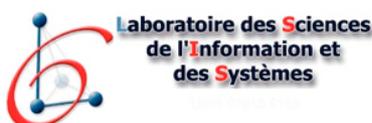
Salary: the net salary is monthly 1960 € for a postdoctoral having a professional experience less than 3 years. It might be higher otherwise and the second year in case of a longer contract. The salary will be also higher the second year in case of an extended contract.

Language: Good communication skills in English are a requirement. Candidates from outside France are highly encouraged to apply.

Applications

- a detailed CV with a list of publications;
- a certified copy of the PhD diploma. A certified translation of the PhD diploma could be required depending of the country where it was obtained;
- a motivation letter.

Names (and contacts) of referees who, upon request, can provide recommendation letters are welcome.



Eloquenzior in brief

The **Project Eloquenzior**, supported and funded by the **University of Aix-Marseille Foundation AMIDEX** aims at promoting an **interdisciplinary** thinking, insofar extracting and analyzing the information contained in digitized forms can let emerge new **analysis mechanisms** of heritage artefacts from the exploration of new methods of measuring **geometric properties**, and then translating these properties into **morphological « signatures »**. Furthermore, detailed analysis of the forms can afford to go up to the **analysis** of how they have been produced, and thus classify them according to the different schools, which have made them. It could also help to enable the **recognition** of many unidentified fragments, which could be matched through their morphological and technological signatures. Moreover, the **physico-chemical markers** highlighted during the conducted analysis on the material studied, both in Delphi and Zama, Tunisia, will be added.

Indeed, in order to constrain, at least initially, the boundaries of this study, observations and descriptions whose interpretation can benefit from a significant accumulation of theories (controlled vocabulary), the team will conduct experiments on two historical forefront objects, rich in information, with a strong symbolic heritage and particularly appropriate for virtual 3D reconstructions, outstanding for **scientists** as to the **general public**.

The Tholos in Delphi (Greece)

Emblematic icon of the classical language of architecture, the building, rotunda Doric dated years 380-370 BC. AD, is located on the terrace of Athena Pronaia in Delphi. Its outer order, climbed from three columns in 1938, has a well-preserved elevation. Due to its state of conservation and considering the possibility of a joint study of its architectural and artistic forms, analyzing the Tholos is particularly relevant. On the patrimonial point of view, Eloquenzior will provide the Greek and international community a complete virtual 3D restitution of the monument and its carved decoration, today broken into hundreds of fragments whose shape analysis shapes achieved in this project will match and merge.

The Attis temple in Zama Regia (Tunisia)

At only a few tens of km away from Tunis, discovered in the 2000s by a team led by Ahmed Ferjaoui (National Heritage Institute of Tunis), the ancient temple of Attis in Zama Regia is still unreleased but about to be published by A. Ferjaoui. Dedicated to god Attis, it offers its exceptional remains of its architecture and gilded and polychrome sculptures dedicated to the god in its sanctuary. The latter - also novel - retain the vestiges with an exceptional state of preservation of their initial surface treatment and appearance (gilding, assorted colors), offering to measurement and 3D digital recording an almost unique stratigraphy for the antique marble sculpture. 3D modeling of surface treatments sculptures Zama, which offers a wide stratigraphy of only a few microns, is a challenge in itself. It is one of the major objectives of the project "Eloquenzior". Partnership with the Laboratory of Molecular and Structural Archaeology (UMR 8220, dir. Dr. CNRS **Philippe Walter**) is a very important asset for obtaining relevant results.

For further information do not hesitate to contact :

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Dr. Livio de Luca (livio.deluca@map.cnrs.fr).

