PARTNER

MAPPA Lab – Dpt. Civiltà e Forme del Sapere, University of Pisa

Italy

MAPPA Lab (digital Methodologies APPlied to Archaeology), based within Dpt.CFS of University of Pisa, is a new multidisciplinary research unit (created in 2011) composed of archaeologists, mathematicians, geologists, GIS specialists, historians, and web developers, fostering its research activities in the fields of archaeological method and theory, archaeological data recording and management, archaeological open data, mathematical/statistical modelling, predictive archaeological modelling, archaeological communication and storytelling, and geo-archaeology.

Role within the project

The University of Pisa MAPPA Lab is the creator and coordinator of ArchAIDE project. Within the project it leads three workpackages: WP1 Management, WP2 Methodologies, specification and design, WP9 Communication, Public engagement, Innovation and some tasks. As coordinator, MAPPA Lab manages the relations within the partnership and with the European Commission and outlines the methodological and practical strategies. Given its experience related to a mathematical approach to archaeology, MAPPA Lab takes care of the aspects connected with the data visualization and data analysis.
A specific effort is dedicated to the management of communication activity to achieve the goal of reaching an as wide as possible audience far beyond the archaeological community, since we believe in the importance of the engagement of the public in the knowledge of scientific progresses, and in the shared and open knowledge of Cultural Heritage data.

www.mappaproject.org
e-mail: mappaproject@gmail.com
Dr.Gabriele Gattiglia: gabriele.gattiglia@for.unipi.it
Facebook: @MAPPALab
Twitter: @MappaProject
Tel. +39 050 2215817

In ArchAIDE
Principal Investigator: Maria Letizia Gualandi
Coordinator of the project: Gabriele Gattiglia
Project and communication manager: Francesca Anichini

Team members:
Simona Bellandi
Sonia Cerrai
Elda Chiriconi
Lorenzo Garzella
Sandro Petri
Nicola Trabucco

Archaeology Data Service – University of York

United Kingdom

The Archaeology Data Service (ADS), based within the University of York, is a national archive for archaeological data. Now in its 20th year, the ADS supports research, learning and teaching with freely available, high quality and dependable digital resources. It does this by preserving digital data in the long term, and by promoting and disseminating a broad range of data in archaeology. The ADS promotes good practice in the use of digital data in archaeology, it provides technical advice to the research community, and supports the deployment of digital technologies.

Role within the project

Within the ArchAIDE project, the Archaeology Data Service (ADS) leads two workpackages: WP3 *Creation of the Application Database* and WP10 *Archiving and Dissemination*. A core component of the new technologies to be developed within ArchAIDE will be the database, which will play the role of the repository for the background knowledge and new knowledge to be produced through use of the projects tools in the field. ADS will work with INERA and other project partners on the design of the database, and the incorporation of multilingual vocabularies. ADS will also oversee the archiving and dissemination of the data produced by the project, following best practice with regard to open data use and re-use, along with dissemination and promotion of the project to the archaeological community. This will include creation of a data management plan to ensure proper handling of the data throughout the project, and undertaking the archiving of the data itself.

http://archaeologydataservice.ac.uk/

help@archaeologydataservice.ac.uk

Twitter: @ads_update

Facebook: @archaeology.data.service

RSS: http://archaeologydataservice.ac.uk/rss/ads.rdf

JISC: ADS-ALL@jiscmail.ac.uk

TEAM MEMBERS:
Julian Richards
Holly Wright
Katie Green
Tim Evans

Archaeological Institute - University of Cologne

Germany

The Department of Archaeology at the University of Cologne is one of the most vibrant institutes in Germany. With over 300 students of different archaeological disciplines (prehistorical archaeology, classical archaeology and archaeology of the roman provinces) and over 70 academic and project staff it is a very strong study and research location. It hosts a research training group, the Forschungsarchiv für Antike Plastik and the Cologne Digital Archaeology Laboratory (CoDArchLab). Through many projects the archaeology department in Cologne is linked-up nationally and internationally.

Role within the project

One of the main strengths of the Archaeological Institute in collaboration with the CoDArchLab is the structuring of object metadata and its archiving. In the database ARACHNE, which is a joint venture with the German Archaeological Institute, different archaeological projects are put together under one framework. Nevertheless these projects can also seen as unique. Within the context of this project, the Cologne work group will contribute to several objectives but it will have three main tasks:

-Provision of test and training data for the software, based upon existing Open Access digital data sets held by the Archaeological Institute and the CoDArchLab via ARACHNE.

-Digitisation of paper catalogues with relevant data for our test beds.

-Creation of a general mapping tool to integrate other structured data sources into the new ArchAIDE - Database

http://archaeologie.uni-koeln.de

e-mail contact: mremmy@uni-koeln.de

TEAM MEMBERS:
Michael Heinzelmann

Michael Remmy

Felix Kuhmaul

The Material Culture and Archaeometry - Universitat de Barcelona
Spain

The Material Culture and Archaeometry UB (ARQUB) unit is focused on promoting studies of material culture, mostly on archaeological ceramics, incorporating archaeometric approaches. Our research deals with the identification of ceramic productions, provenance and technology, quantification of ceramic assemblages and the development of theoretical and methodological framework for archaeometric research. Our multidisciplinary approach interrelates the archaeological information, with the written sources, and then it deeps in the material dimension of pottery.

Role in ArchAIDE

We will support from our experience as archaeologists to the interpretation of ceramic productions from the Roman period to the 18th century: determination of shapes, classification, assignation of typologies, recognition of decorations and potters' stamps, identification of provenance and technology and the impact that the manufacture process has on the visual characteristics of pottery. We could provide examples of material already classified and studied from actual sites.

Our team will be participating in the tasks related to the development of methodologies, scenario definition, user requirement collection and analysis, the creation of multilingual vocabularies, the selection of catalogues and their digitalisation and the implementation of documentation and archival component. We will be significantly involved in the tests and assessments of the overall system, and we will collaborate in the preliminary validation on sample datasets. Finally, we will participate in the consortium management, and on the communication, exploitation, innovation, and archiving and dissemination activities, including the organisation of a multi-event.

Link to the Research Institution web site

http://www.ub.edu/gracpe/arqub/
https://www.facebook.com/ARQUB-115192055184859/?fref=ts
http://www.ub.edu/web/ub/ca/

Contacts

Dr. Jaume Buxeda i Garrigós
Cultura Material i Arqueometria UB (ARQUB, GRACPE)
Dept. de Història i Arqueologia (Despatx 1029)
Facultat de Geografia i Història, Universitat de Barcelona
C/ de Montalegre, 6, 08001 BARCELONA (Catalonia, Spain)
Tel. +34 934 037 535 Fax. +34 934 037 541
e-mail: jbuxeda@ub.edu

Team members

- **Dr. Jaume Buxeda i Garrigós**
- **Dr. Marisol Madrid i Fernández**
- **Dr. Eva Miguel Gascón**
- **Dr. Joan Sanmartí i Grego**

- **Dr. Meritxell Tous Mata**
- **Cristina Fernández de Marcos García**
- **Dr. Xavier Rubio Campillo**
- **Julia Beltrán de Heredia Bercero**
- **Emili Revilla Cubero**

Tel Aviv University
Israel

Tel Aviv University (TAU) is the largest university in Israel and the only Israeli institution to make it onto the list of the world's top 200 most reputable schools, according to rankings released by the Times Higher Education on March 2015. The project takes place in the school of Computer Science, which is ranked 20 in the Shanghai ranking out of all Computer Science departments in the world. Within the school of Computer Science, the project will be located at the Deep Learning lab. This lab, headed by Prof. Wolf, is the first and largest research lab in Israel dedicated to Deep Learning. At this time, 20 graduate students form this research group. The lab activities include innovative research in face recognition, document analysis, image textual description, and action recognition, among other fields.

Role in the project:
The research group at TAU focuss on developing similarity scores based on both shape and image data using Deep Neural Networks. They will employ the power of parallel computing offered by high-end GPU cards for implementing a new family of innovative methods aimed at finding both shape based and appearance based similarities among pottery artifacts.

Team member

Lior Wolf

Barak Itkin

Visual Computing Lab - CNR-ISTI

Italy

CNR-ISTI is an institute of CNR, located in Pisa and devoted to research on ICT. The Visual Computing Lab (VCLab, http://vcg.isti.cnr.it/) is a research units of CNR-ISTI. Current research focuses on: 3D digitization/scanning technologies, geometric data processing, visualization systems, multi-resolution approaches, 3D Web Applications. VCLab has a long track record in the use of 3D graphics for Cultural Heritage applications. VCLab contributed to several EU and national projects and has a very solid experience in the design of open source systems (e.g. MeshLab http://meshlab.sourceforge.net/ and 3DHOP http://vcg.isti.cnr.it/3dhop/).

Role in ArchAIDE

The main contribution of CNR in the ArchAIDE project will be in the coordination of WP4 (Technologies for the digitization of catalogues), focusing on the design of a methodology and tools for the digitization of the catalogues (our starting knowledge) and the conversion of the information contained in catalogues into data structures adequate to support archiving and shape-based recognition/archaeological analysis.
CNR will also contribute extensively to WP 6 (Shape and image-based similarity search and retrieval) and WP 7 (The mobile tool and Front end Desktop Application); CNR contribution will be mostly oriented to the design of geometry processing kernels (WP6) and visualization and interaction (WP8). CNR has a relevant experience in the design of algorithms and software tools for processing 2D/3D sampled data, including interactive visualization systems (on desktops, web and mobile platforms).
Finally, CNR will contribute to other WPs (such as WP2-WP3-WP5, to ensure smooth communication and integration of the technologies developed in the previous WPs) and to WP8 (Test and assessment of the overall system on application scenarios) and WP9 (Communication/Exploitation/Innovation).

http://vcg.isti.cnr.it/

Roberto Scopigno r.scopigno@isti.cnr.it

Matteo Dellepiane matteo.dellepiane@isti.cnr.it

Team Members

Roberto Scopigno

Matteo Dellepiane

Marco Callieri

Francesco Banterle

BARAKA ARQUEÓLOGOS

Baraka Arqueólogos is a spanish enterprise specialized in archaeology and cultural heritage.

We work mainly in Spain, more frequently in the regions of Castilla-La Mancha, Madrid, Extremadura and Castilla-León. But we also participate in archaeological research projects in other countries, as Morocco, Saudi Arabia, Turkmenistán, or Panamá.

We usually carry out preventive archaeological interventions, but also take part in projects of historical and archaeological research, often in co-operation with Complutense University of Madrid and University of Castilla-La Mancha.

Role in ArchAIDE:

The most remarkable participation of Baraka Arqueólogos in ArchAIDE project will be in the WP8, in which we will be the leader of the Task 8.1. We will test the designed tools on different pottery classes, on real-cases scenarios from contract archaeology interventions.
We will diffuse this system for its objective and subjective evaluation, performing it in real working conditions. Focused on the evaluation of both the system and its practical usability, evaluated from an end-user point of view.
In relation with our professional activities, we work daily in the treatment and study of archaeological ceramics.
We know the entire process for studying archaeological ceramic, we work both in preventive and research archaeology, and in communication and dissemination of the obtained knowledge. We meet a wide number of archaeology companies and professionals.
Then, the profile of our company is appropriate for reaching the objectives of this project.

Web Links:

www.barakaarqueologos.es/

https://es-es.facebook.com/BARAKA-ARQUEÓLOGOS-160170807379194/

Team member

Miguel Ángel Hervás Herrera.
Diego Lucendo Díaz.
Tomás Torres González.
Luis Alejandro García García.
Manuel Melero Serrano.
Manuel Retuerce Velasco.

ELEMENTS

Elements S.L. is a private archaeological consulting company founded in Mallorca in 2009. The company's main activity is devoted to archaeological excavations, pottery catalogues, cultural heritage inventories, and 3d modelling of buildings and archaeological materials. Furthermore, the company has developed AddHeritage v1.0 software that provides a useful tool for managing heritage and urban planning inventories.

Role in Archaide

Elements main role is in the process of data base implementation through user requirement collection and previous experimentations of the outcomes of the project on both rescue and research archaeological interventions. The instruments developed will be tested and assessed on several real-cases scenarios.

Specifically, Elements participation is focussed on

1. Defining relevant case studies
2. Search of archaeological catalogues and production of relevant data
3. Testing the overall system already created in real scenarios.

Elements has experience in development and application of digital technologies in archaeological excavation recording, as well as on ceramic studies. The company has been responsible for the digital inventory of a set of ceramics (Museum of Mallorca collection), which included 3D recording and scan of potteries and sherds.

Link:

www.elements-arq.com

Instagram: @elementscgdpc

Youtube: https://www.youtube.com/user/ElementsCGDPC

Team Member

Llorenç Vila

INERA

……