

GIScience 2018 Workshop:

**2nd Workshop On Computing Techniques For Spatio-Temporal Data  
in Archaeology And Cultural Heritage (COARCH)**

<http://coarch18.di.univr.it/>

**Call for Participation**

## Call

Archaeological data, and more in general cultural heritage information, are characterized by both spatial and temporal dimensions that are often related to each other and are of particular interest for supporting the interpretation process that allows achieving new knowledge about ancient times.

For this reason, several research works proposed attempts to develop new information management techniques, some of them inherit directly from geographical information science. However, cultural heritage and archaeology still require a tailored support to:

- the collection of spatio-temporal and their effective representation for enhancing interoperability, especially with the rise of 3D acquisition techniques that involves big data characteristics.
- the processing of raw data in order to identify artifacts and define their allocation in space and time, in relation with ontological developments.
- the reconstruction of ancient structures (buildings, walls, castle, etc.) or their temporal evolution, based on deep learning process allowing automatic reconstruction, segmentation, complex objects identification.
- the integrated access and querying of the collected data in different formats, structures, data models.

## Topics

Knowledge representation

- Modeling of spatio-temporal data in archaeology and cultural heritage
- Techniques for supporting interoperability of spatio-temporal data
- 3D digital artifact capture, representation and manipulation
- Workflow design for supporting the archaeological interpretation process

Knowledge discovery

- Analytic tools to assist scholars' research on archaeological data
- Tools for reconstruction and processing of spatio-temporal evolution
- Spatial temporal data mining on spatio-temporal data in archaeology
- Machine learning techniques applied to archaeological data

## Important Dates

- Papers due: May 1, 2018
- Notification of acceptance: May 28, 2018
- Deadline for author registration: June 18, 2018
- Deadline for camera-ready papers: June 18, 2018
- Workshop: August 28, 2018

Depending on the number of accepted articles, the workshop can be either a half- or full-day event. By default, the workshop will be a half-day event (~3h30m overall), but can be extended to a full-day event (~7h overall) in case of high number of accepted papers.

## Submissions

Submissions of high quality papers describing research results or on-going work are solicited. Submitted papers should contain original, previously unpublished content, should be written in English, and must not be simultaneously submitted for publication elsewhere. Submitted papers will be refereed by at least three reviewers for quality, correctness, originality, and relevance. Accepted papers will be presented at the workshop and included in the proceedings, which will be published together with the GIScience proceedings in LIPIcs, the Leibniz

International Proceedings in Informatics series (<https://www.dagstuhl.de/en/publications/lipics>). Acceptance of a paper is contingent on one author presenting the paper at the workshop.

Contribution length should range between 15 pages (including tables, figures, and references). All papers should follow the sample article provided by LIPIcs (<http://drops.dagstuhl.de/styles/lipics-v2016/lipics-v2016-authors.tgz>). LIPIcs also provides a LaTeX class and template for papers. Papers should be submitted electronically via the EasyChair system at <https://easychair.org/conferences/?conf=coarch18>.

## Organization Committee

- Pierre Hallot, Cultural Heritage Documentation, ULiège, Belgium [p.hallot@uliege.be](mailto:p.hallot@uliege.be) ;
- Sara Migliorini, Computer Science, University of Verona, Italy [sara.migliorini@univr.it](mailto:sara.migliorini@univr.it) ;
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## Program Committee

- Piergiovanna Grossi, University of Verona, Italy
- Eliseo Clementini, University of L'Aquila, Italy
- Shawn Ross, Macquarie University, Australia, to be confirmed
- Christina Garduno Freeman, University of Melbourne, to be confirmed
- Mauro Negri, Politecnico di Milano, Italy
- Gerald Hiebel, University of Innsbruck, Austria, to be confirmed
- Marco Callieri, Visual Computing Lab of ISTI-CNR, Italy
- Kathleen Stewart, University of Maryland, USA
- Pierre Grussenmeyer, INSA Strasbourg, France
- Livio de Luca, UMR CNRS / MCC Map, France, to be confirmed
- Xavier Rodier, Université de Tours, France
- Roland Billen, ULiège, Belgium
- Pierre Hallot, ULiège, Belgium
- Alberto Belussi, University of Verona, Italy
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