

Nicola Carboni

Curriculum Vitae

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Research and Professional Experience

- July 2018 - **Research Fellow - Semantic Architect**, *University of Zurich*, Zurich, Swiss Art Research Infrastructure.
- Development of a framework for a distributed system of reference resource.
 - Knowledge patterns for standardising reference information about art history
- Jan. 2019 - Sept. 2019 **Data Architect**, *IUAV University*, Venice, Burckhardtsource.org.
- Develop a semantic model for the correspondence of Jacob Burckhardt.
- Feb. 2018 - June 2018 **Digital Humanities Fellow**, *Harvard University*, Florence, Harvard Center for Italian Renaissance Studies.
- Modeling of Iconographic & Symbolic items in visual heritage.
 - Data modelling (CIDOC-CRM) of Epistolarium.
- June 2014 - July 2017 **EU Marie Curie Early Stage Researcher**, *CNRS*, Marseille, MAP Laboratory.
- ITN-DCH project: **Initial Training Network for Digital Cultural Heritage**.
 - Create a framework for the description of tangible and intangible cultural objects.
 - Develop a CIDOC-CRM extension for iconographic & symbolic meaning of cultural objects.
 - Analysis and development of a metadata set for the registration of provenance information in 3D processing.
- Nov. 2013 - May. 2014 **Data Curator and Modeler**, *Informatica Trentina*, Trento, Italy, Open Data project.
- Development a bottom-up ontology for describing public data.
 - Data cleaning, refinement mapping and enrichment.
 - In charge, from a technical standpoint, of the release of the data. Responsible for developing guidelines for the providers.
 - Coordinating the information architecture and workflow of of the catalog & collaborating in the EU FP7 Fusepool project.
- Oct 2012 - Dec 2012 **Research internship**, *CVCE - Digital Humanities Lab*, Salem, Luxembourg.
- image-based modeling of underwater cultural heritage assets.
 - Developing an entity-relationship model for the EU FP7 project CUBRIK.
 - Creating guidelines and workflows for the model.
 - Defining the rules of an authority file for non-authors (EU politicians)

Research Visit

- Jan. 2015 **Researcher**, *FORTH ICS*, Heraklion, Greece.
- Ontology engineering and data integration with CIDOC-CRM.
- Feb. 2015 **Researcher**, *KAAK, German Archeological Institute (DAI)*, Bonn, Germany.
- Data management and modelling. CIDOC-CRM: MAyaArch3D project.

- Feb. 2016 **Researcher**, *3DOM*, Fontazione Bruno Kessler (FBK), Trento, Italy.
· data acquisition and processing for image-based modeling and web visualisation of 3D point clouds. Data enrichment and provenance information.
- Apr. 2017 **Researcher**, *NTUA*, National Technical University of Athens, Athens, Greece.
· Testing of OpenCV for ontology-based semantic tagging of elements in 2D images.

Education

- Jun 2014 - July 2020 **PhD, Engineering**, *NTUA*, Athens, Greece.
· *Objective 1*: How do we assign meaning to the visual heritage.
· *Objective 2*: How do we formalise the relationship between meaning and visual heritage.
· *Objective 3*: How do we spatialise semantic information in a three-dimensional representation.
· *Objective 4*: How do we assess the relationship between the digitised visual heritage and the original artefact.
- Sept. 2011 - Oct. 2013 **International MA in Digital Library Learning**, *DILL*, Oslo, Tallinn, Parma, Erasmus Mundus.
· *Major*: Digital library.
· *Thesis title*: Digital preservation network: a case study about CLOCKSS.
· *Thesis content*: Interviews, document and workflow analysis about the usage, the governance, and the trends of CLOCKSS as main distributed network for the digital preservation of e-journals.

Universities

Oslo Metropolitan University, *OsloMet*, Oslo, Norway.

- *Courses include*: Ontology creation, Linked Open Data, RDF, Metadata, Usability studies.

Tallinn University, *TLU*, Tallinn, Estonia.

- *Courses include*: Knowledge management and business oriented information management.

Università di Parma, *UNIPR*, Parma, Italy.

- *Courses include*: UX, project management, KPI and evaluation methods, digital library management.

- Sept. 2007 - Sept. 2010 **Bachelor in Cultural Heritage Science**, *UNIFI*, Pisa, Italy.
· *Major*: Cultural Heritage Science.
· *Courses include*: Information science, knowledge organisation, textual bibliography, cataloguing, history of art, literature, ethnography, history.

Teaching

- Course** *Integrating Human Science Data using CIDOC-CRM as Formal Ontology: a practical approach* at the European Summer University in Digital Humanities held in *Leipzig, Germany*
- Lesson** *Digital Art History* at the Summer school *Stucchi E Stuccatori Ticinesi a Roma - Dalla riscoperta cinquecentesca alla grande tradizione barocca* held in *Rome, Italy*
- Lesson** *Linked data for Digital Humanities* at the Master *Comunicazione Storica: televisione e multimedialità* held in *Rome, Italy*
- Lesson** Lesson on *Digital Heritage* within the Digital Library Learning MA — *Online*

Organization

- Conference** ITN-DCH - Digital Heritage 2017 Final Conference — *Olimje, Slovenia*
Workshop Workflow for the Integration of Heritage Digital Resources — *Olimje, Slovenia*

Languages

- Italian Native
English Fluent
French Intermediary

Computer Skills and Technologies

- Data UML, XML, RDF, Protege, OpenRefine, Silk, X3ML/3M, Ontop.
Web HTML, CSS, Drupal, KirbyCMS, Wordpress.
3D MicMac, Photoscan, Potree, 3DHOP, Faro Scene, MeshLab.
Server Apache, SQL, TemaTres, iQvoc, Skosmos.
Other QGIS, CLI, Markdown, GIT, Microsoft/Libre Office, Adobe Lightroom/Photoshop, Omnigraffle & Wireframing.
Platforms Mac OS, Linux, Windows.

Publications

- 2019 Nicola Carboni, Susanne Muller, and Maurizio Ghelardi. Towards a Foundation for Documenting Digital Textual Resources with CIDOC-CRM, Conference proceedings of the workshop *Scholarly Digital Editions, Graph Data-Models and Semantic Web Technologies*, in press.
Nicola Carboni and Livio De Luca. An Ontological Approach to the Description of Visual and Iconographical Representations, *Heritage*, 2(2)1191–1210.
- 2017 George Bruseker, Nicola Carboni, and Anaiïs Guillem. The Role of Formal Ontology and CIDOC CRM. In M. L. Vincent, V. M. Lopez-Menchero, M. Ioannides and T. E. Levy (Eds.), *Heritage and Archaeology in the Digital Age*, pages 93-131. Springer, 2017.
Nicola Carboni and Livio De Luca. Towards a Semantic Documentation of Heritage Objects through Visual and Iconographical Representations, *International Information Library Review*, 49(3).
- 2016 M.M. Ramos, D. Bellido, N. Carboni, M. Domajnko, E. K. Stathopoulou, G. Stavropoulou, D. Morabito, and F. Remondino. Complex 3d heritage architectures accessible on the web. In *Proc. 8th Arqueologica 2.0*, pages 426–429, 2016.
Nicola Carboni and Livio De Luca, Towards a conceptual foundation for documenting tangible and intangible elements of a cultural object, *Digital Applications in Archaeology and Cultural Heritage*, 3(4):108–116.

Nicola Carboni, G Bruseker, A Guillem, Diego Castañeda Bellido, Chance Coughenour, M Domajnko, Marleen de Kramer, Magda Calles Ramos, E K Stathopoulou, and Rossella Suma, Data Provenance in Photogrammetry Through Documentation Protocols, *ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences*, pages 57–64.

- 2015 G Bruseker, A Guillem, and N Carboni, Semantically Documenting Virtual Reconstruction: Building a Path to Knowledge Provenance, *ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences*, II-5/W3:33–40.

Scholarships, Awards and Grants

- 2018 Digital Humanities Fellowship. Harvard University.
2014-2017 Marie Curie Early-Stage Researcher Fellowship. European Commission (FP7).
2011-2013 EU - Erasmus Mundus Master Programme Scholarship.

Miscellaneous

- May 2017 Chair of of the session "*Ontologies and Metadata in Digital CH*" - ITN-DCH Digital Heritage 2017 Final Conference, Olimje, Slovenia.
Nov 2016 Chair of the session "*3D Reconstruction and Modeling*" - Euromed 2016, Nicosia, Cyprus.