

[PhD grant in Computer Science @Free University of Bozen-Bolzano](#)

"Design and implementation of a system based on Virtual Knowledge Graphs for the use of open data related to cultural heritage"

One four-year (industrial) PhD grant on "Design and implementation of a system based on Virtual Knowledge Graphs for the use of open data related to cultural heritage" is offered by the *Faculty of Computer Science of the Free University of Bozen/Bolzano* (Italy) jointly with the *Laboratory for Applied Ontology* of the Institute of Cognitive Sciences and Technologies of the National Research Council, Trento (Italy) and *NOI Techpark Südtirol/Alto Adige*, Bozen/Bolzano (Italy).

Within this PhD program, the candidate will focus on the analysis and conception of a system for the integration of open data on cultural heritage present in a territory. In particular, the research will be carried out in the context of the ongoing *OpenDataHub.bz.it* project enriching the data and the software architecture currently used, as well as the know-how of the Open Data Hub team.

The general aim is to integrate and elaborate open data about artefacts, events, activities, etc., made available by the actors present in a territory in order to guide a resident or tourist in the cultural offer in the area. The architecture to be developed will be based on an ontological model - which uses the *Virtual Knowledge Graph* approach - of the notion of *cultural heritage* that includes both *tangible* artefacts (artistic and/or archaeological objects, monuments, churches, etc.) and *intangible* artefacts (popular and culinary traditions, uses and costumes, traditional manufacturing techniques, etc.).

The PhD student will acquire multi-disciplinary skills concerning: ontological analysis, conceptual modelling, formal knowledge representation, development of data management systems based on ontologies (OBDA: Ontology-Based Data Access), integration of heterogeneous and distributed data, and development of technologies for open and semantically transparent access to data and models.

The grant amounts to 68,000 € (i.e., 17,000 € per year, net after taxes); for research visits abroad the grant increases up to 50%. Additional substantial extra funding is available for participation to international conferences, schools, workshops, research visits. The language of the PhD programme is English (for more info, the call, and application details look at:

<https://www.unibz.it/en/faculties/computer-science/phd-computer-science>).

The deadline for applications will be on the **13th of July, 2020**.

Contact persons:

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