

**Call for application for research scholarships
for post-graduate international candidates**

RESEARCH PROJECT N. 1

Title
METRIC AND METRIC BASED DOCUMENTATION OF CULTURAL HERITAGE ASSETS
Scientific responsible (name, surname, role)
Fulvio Rinaudo, Associate Professor (fulvio.rinaudo@polito.it)
Short description of the research activity (max 250 words)
The proposed research activity investigates the role of Geomatics tools inside the Documentation strategy of a Cultural heritage asset. Starting from the study (both theoretical and experimental) of new technologies and instruments to acquire primary data (point clouds and images) by considering the different dimensions and natures of the Cultural Heritage Assets (natural landscapes, urban centers, buildings, movable objects), the research will investigate the strategies to be adopted for the 3D models setup by considering different possible applications (GIS, BIM, restoration design, management, valorization, etc.). The generated 3D models will be used as geographic references for GIS and BIM applications to support data integration coming from different disciplines (e.g. history of architecture, archaeology, restoration, chemical and physical analysis, structural analysis, etc.) to build up efficient and redistributable solution for a correct documentation strategy. The strong collaboration with the research Group I-Change (http://www.i-change.polito.it/) will allow the setup of specific tools and solution to support the Digital History researches.
Specific requirements (experiences, skills)
Basic knowledge on Geomatics and related disciplines, basic knowledge of Autodesk platforms or similar.
Website of the research group (if any)
http://www.dad.polito.it/en/il_dipartimento/laboratori_e_centri/laboratori/area_dell_analisi_ambientale_tecnologica_del_costruito_del_rilievo/geomatica_per_i_beni_culturali
Keywords (min 3, max 6)
Photogrammetry, SFM, 3D modelling, GIS, HBIM
Research Area (max 1)
Architecture