



*International Doctorate in Civil and Environmental Engineering*

# **From geomatic to seismic safety: an integrated design methodology for H-BIM**

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<b>Info</b>	
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<b>Abstract</b>
<p>Starting from the end-to-end workflow for Historical Building Information Modelling (H-BIM) and the aim of improving the automatization of the process and the construction of three-dimensional (3D) and informative models, my research comes out to explore new strategies and methods for 3D point clouds semantic segmentation of heritage and historical scenarios. The research does not have the aims to develop new algorithms but, starting from existing literature, it has the aims to test and validate existing algorithms developed for other tasks, to improve their performance on heritage data, and to integrate existing procedure with new methodologies that could be improve their accuracy and reliability.</p> <p>Recently, 3D point clouds semantic segmentation (PCSS) is attracting increasing interest due to its applicability in a wide range of different applications and various algorithms and techniques are proposed every year. With my research I am going to focus on Deep Learning and Neural Networks techniques that, according with literature, are still in infancy and but seem the most promising in the future.</p>