

# The dome of the cathedral of Santiago de Cuba: degradation and consolidation.

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**Abstract** The Cathedral of Santiago de Cuba overlook the Parque Céspedes, main plaza of the city. From 1522, year of the first building, it underwent reconstructions over the centuries,

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since in 1804 the 4<sup>th</sup> Cathedral was built by Pedro Fernández. In 1922 stylistic changes give its present eclectic aspect.

The construction technique, is a hard wood frame drowned in stone masonry walls, ended with a colonial roof covering. The dome was built according to the technique named cuje or embarrado, clay interwoven with thin branches of reed. The main cedar wood skeleton consists of 40 meridian arches, linked with a series of parallels, finished with a lead shell. The dome was repaired many times, because of fires, hurricanes, or earthquakes occurring. Incorrected interventions weakened the structure. The restoration is at work, taking part in an international cooperation project, aimed at the social and architectural rehabilitation of the building and of its neighbourhood.

**Keywords** wood dome, numerical method, Cuba