Researchers from the UGR develop a new software which adapts medical technology to see the interior of a sculpture

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Credit: University of Granada

A student at the University of Granada (UGR) has designed software that adapts current medical technology to analyze the interior of sculptures. It's a tool to see the interior without damaging wood carvings, and it has been designed for the restoration and conservation of the sculptural heritage.

Francisco Javier Melero, professor of Languages and Computer Systems at the University of Granada and director of the project, says that the new software simplifies medical technology and adapts it to the needs of restorers working with wood carvings.

The software, called 3DCurator, has a specialized viewfinder that uses computed tomography in the field of restoration and conservation of sculptural heritage. It adapts the medical CT to restoration and it displays the 3-D image of the carving with which it is going to work.

Replacing the traditional X-rays for this system allows restorers to examine the interior of a statue without the problem of overlapping information presented by older techniques, and reveals its internal structure, the age of the wood from which it was made, and possible additions.

"The software that carries out this task has been simplified in order to allow any restorer to easily use it. You can even customize some functions, and it allows the restorers to use the latest medical technology used to study pathologies and apply it to constructive techniques of wood sculptures," says professor Melero.

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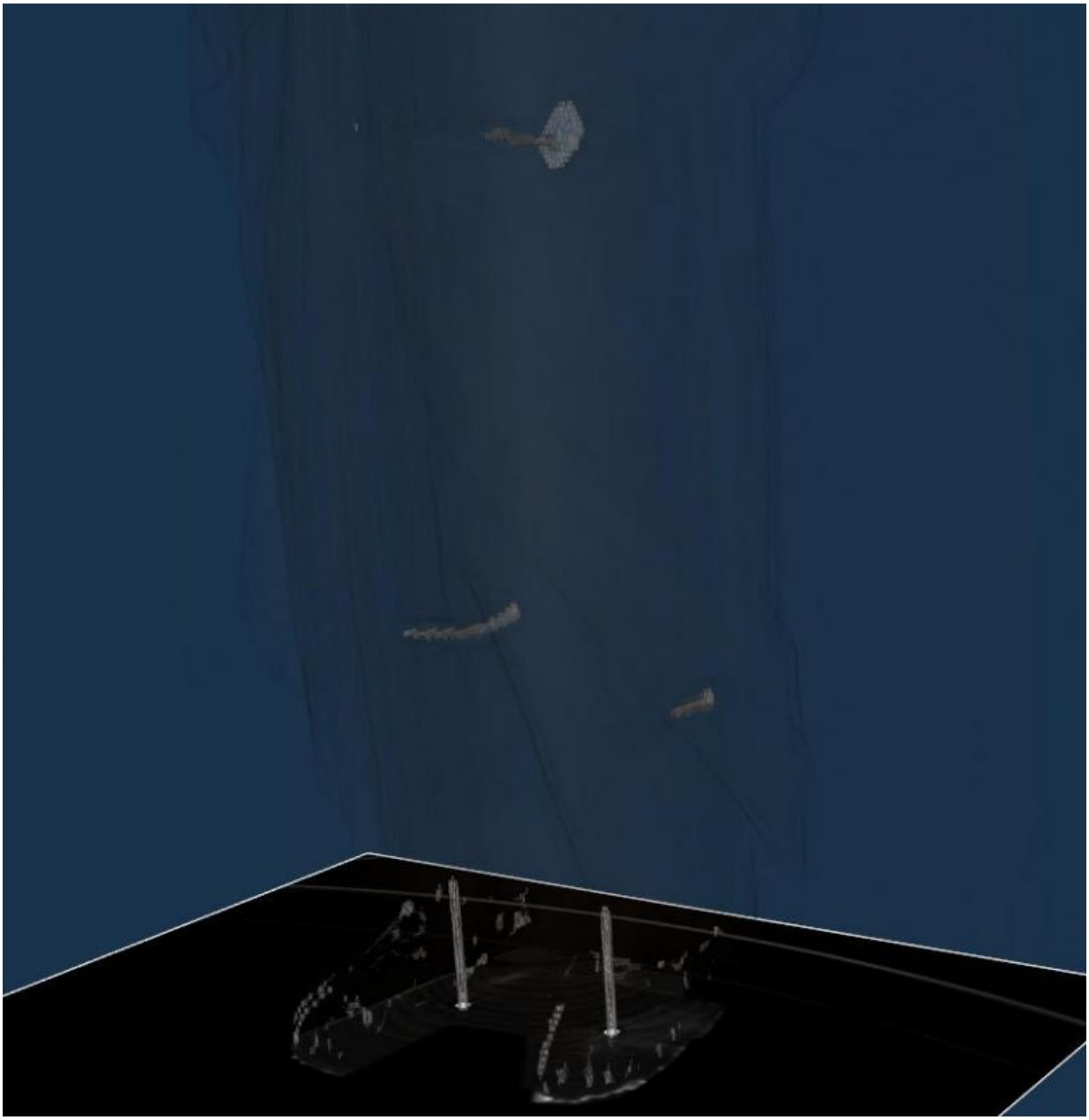
This system, which can be downloaded for free from www.3dcurator.es, visualizes the hidden information of a carving, verifies if it contains metallic elements, identifies problems of xylophages like termites and the tunnel they make, and detects new plasters or polychrome paintings added later, especially on the original finishes.

The main developer of 3DCurator was Francisco Javier Bolívar, who stressed that the tool will mean a notable breakthrough in the field of conservation and restoration of cultural assets and the analysis of works of art by experts in Art History.

Professor Melero explains that this new tool has already been used to examine two sculptures owned by the University of Granada: the statues of San Juan Evangelista, from the 16th century, and an Immaculate from the 17th century, which can be virtually examined at the Virtual Heritage

Site Of the Andalusian Universities (patrimonio3d.ugr.es/).



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