

Piercarlo Dondi, chercheur de l'Université de Pavie et visiting lecturer à Polytech Paris-Saclay, fera une présentation des activités de recherche de son laboratoire autour de la conservation du patrimoine.

Date et lieu, durée : mardi **06 décembre 2022, à 9:30** dans la salle **1B26 de l'ENS Paris-Saclay**, 4 Avenue des Sciences, Gif sur Yvette. 1h-1h15 de présentation, suivie de questions.

Un lien Zoom sera envoyé pour ceux qui souhaitent assister mais ne peuvent être présents. Dans ce cas, il faut écrire à emanuel.aldea@u-psud.fr afin de récupérer les informations de connexion.

Sujet de la présentation

This talk will provide an overview of various Digital Humanities projects in which the Computer Vision and Multimedia Laboratory (University of Pavia) was involved from 2014 to 2022.

The content of the presentation is summarized as follows:

- 3D scan, modelling and printing
 - Digitalization of historical musical instruments
 - 3D printing and tactile images
 - Large 3D reconstructions (The city of Pavia in 16th century, The Ark of Saint Augustine)
- Image processing
 - Writing analysis of ancient manuscripts
 - Analysis of UV induced fluorescence images
 - Monitoring of state of conservation of historical musical instruments
 - Stylistic analysis
 - Digital anastylis (DAFNE dataset)
- Interactive applications
 - Gestural interaction
 - Gaze-based interaction
 - Augmented reality

Bio

Piercarlo Dondi is an Assistant Professor (RTDA) at the Department of Electrical, Computer and Biomedical Engineering of the University of Pavia (Italy). His main research topics include Computer Vision, Human-Computer Interaction, Digital Humanities, and 3D Computer Graphics.

He received the MSc degree in Computer Engineering at the University of Pavia in 2008 and then he completed the PhD in Electronics, Computer Science and Electrical Engineering in 2012 in the same university. He ideated and developed various image processing algorithms for the analysis of historical musical instruments, as well as interactive applications for the visualization of the obtained data (both for helping experts in their work and for scientific dissemination in museums). He also participated in the definition of a protocol for the 3D scanning of historical musical instruments, and then he digitalized numerous instruments and relics held in the “Museo del Violino” of Cremona (Italy) and in other important Italian museums. He also co-supervised the creation of large 3D models (e.g., the reconstruction of the city of Pavia in the Renaissance), made by students of master’s degree in Computer Engineering of University of Pavia, as part of a new teaching approach. Since 2019 he collaborates with the SATIE Lab of the Université Paris-Saclay on projects related to the

monitoring of the state of conservation of historical musical instruments and the reconstruction of destroyed frescoes. Regarding Human-Computer Interaction, his recent activities focused mainly on gaze-based applications, both for improving accessibility in museums (especially for people with motor disabilities), as well as for general-purpose uses, such as writing or web browsing. From the end of 2021, he is involved in a new project activity, in collaboration with EUCENTRE, regarding the use of 3D modeling and deep learning to identify damages in buildings and civil structures after earthquakes.

En vous espérant nombreux,