

HerOn Project

The **HerOn** project aims to integrate and promote the use of "Digital Twins" applied to architectural, archaeological, and natural cultural heritage, combining satellite, aerial, and terrestrial technologies to enhance its documentation, analysis, and education. It brings together the Universidad de Zaragoza and the Universidad Pública de Navarra from Spain, the Università degli Studi di Brescia and the Università degli Studi di Torino from Italy, and the Universitatea Transilvania din Braşov from Romania, with a multidisciplinary approach that encompasses architecture, archaeology, engineering, education, geographic sciences, and legal aspects.

The goal is to develop methodologies and platforms that facilitate the conservation, dissemination, and cultural and touristic promotion of heritage, overcoming current technological fragmentation. Additionally, it encourages the participation of cultural institutions, businesses, and society to achieve social impact, accessibility, and inclusion. HerOn represents a step forward in the digital management of European heritage, fostering innovation, knowledge, and sustainability.

Digital Twins

Archaeology

Legal Framework

Architecture

Remote Sensing

Education

Venue of the International Seminar

Universidad de Zaragoza

Campus San Francisco

Facultad de Filosofía y Letras

Aula Magna


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This seminar is eligible for **1 ECTS** credit approved by UNIZAR

Registration Form:

<https://forms.gle/E1SBf8EK9oxEcSGT8>



Supported by:



HerOn

UNITA Starting Grant

International Seminar

**Digital Cultural
Heritage Twins
Connections**



*Bridging Documentation, Analysis and
Education from Satellite to Ground*

Universidad de Zaragoza

30 september, 1 - 2 october 2025

<https://unizar-segap.digher.es/heron/>

SEMINAR PROGRAM

TUESDAY, 30TH SEPTEMBER 2025

17:00h *Presentations and workshops at the exhibition "Digital Archaeology: From Satellite to Ground".*

Education / Architecture / Digital Twins / Archaeology / Remote Sensing / Case Studies / Legal Framework.

Exhibition hall and atrium of the Facultad de Filosofía y Letras (Universidad de Zaragoza).

WEDNESDAY, 1ST OCTOBER 2025

Seminar Presentation

9:30h *Seminar presentation.*

10:15h *HerOn Project.* Team leaders.

Session on Education, Knowledge Transfer

10:30h *Un marco evaluativo para la educación patrimonial: indicadores desde el Plan Nacional - An evaluative framework for heritage education: deriving indicators from the National Plan.* Amaia Arriaga. Universidad Pública de Navarra.

11:00h *Métodos geofísicos en proyectos arqueológicos del Instituto del Patrimonio Cultural de España. Ministerio de Cultura.* Juan José Gordón. Instituto del Patrimonio Cultural de España.

11:30h Coffee Break.

Session on Remote sensing

12:00h *EO data integration for Environmental Heritage Analysis: from Landscape to Local Level* Universita. Enrico Borgogno. Università di Torino.

12:30h *Integration of field radiometry and multispectral analysis with UAV for the study of the archaeological site 'Forau de la Tuta' (Artieda, Zaragoza).* Alessandro Mateos. UNITBV-UNIZAR.

13:00h *Optical and radar data for analyzing the cultural heritage sites in Brasov area, Romania.* Mihai Nita, Mihai Ivanovici. Universitatea Transilvania din Brasov.

14:00h Lunch.

Session on Virtual Reconstruction, Architecture and Legal Framework

16:00h *From Digitization to 3D Dissemination in Cultural Heritage: Case Studies in Virtual Reconstruction.* Miguel Fernández, Pablo Aparicio y Néstor F. Marqués. 3DSTOA.

16:30h *HBIM for the study and preservation of built heritage. The case of the medioeval "Pallata" tower in Brescia.* B. Scala, P. Borin, I. Giustina. Università di Brescia.

16:45h *Finite Element Modelling of Brescia Cathedral's Dome. A Synergy of Historical Techniques and Structural Design.* L. Facconi, I. Giustina, F. Minelli, E. Sala. Università di Brescia.

17:00h *Digital modelling and architectural history. The reconstruction of Montichiari neo-medioeval castle through Antonio Tagliaferri's first designs.* P. Borin, I. Giustina. Università di Brescia.

17:15h *3D Digital Mapping Techniques for the Documentation of Cultural Heritage Sites with a Digital Twin Approach* G. Vassena. Università di Brescia.

17:30h *Digitisation of Cultural Heritage and Copyright in the European Framework. Issues and topics.* E. Fusar Poli, P. Morandi Università di Brescia.

THURSDAY, 2ND OCTOBER 2025

Session on Archaeology and Rock Art

9:30h *Altamira y su Gemelo Digital: historia de un anhelo.* Lucía M. Díaz-González y Pilar Fatás. Museo Nacional y Centro de Investigación de Altamira. Ministerio de Cultura.

10:00h *Geomatic Engineering and Geospatial Sciences Applied to Cultural Heritage Research.* Jorge Angás. ARAID-Universidad de Zaragoza.

10:30h *La aplicación de nuevas tecnologías en la presentación del Arte Rupestre, en el Parque Cultural del Río Vero.* Nieves Juste. Parque cultural del río Vero.

11:00h *Searching for the Origins of Rock Art in Aragón (SEFORA).* Manuel Bea. Universidad de Zaragoza.

11:30h Coffee Break.

Session on Projects and Case Studies

12:00h *Monitorización Ambiental y Conservación Preventiva del Arte Rupestre.* Tona Zalbidea. UPV.

12:30h *Knowledge Heritage Network (KHN): hacia una nueva conservación preventiva del patrimonio cultural. El eje Retech en Aragón.* Miguel Ángel Pellés. Gobierno de Aragón.

13:00h *DiGHER. Gemelos Digitales para la conservación del patrimonio cultural: gestión, monitorización e interpretación.* Carlos Valladares. Universidad de Zaragoza.

14:00h Lunch.

Session on Geomatics and High-Performance Computing (HPC)

16:00h *Escáneres láser 3D y drones aplicados al patrimonio cultural.* Jorge Miranda. 3DScanner.

16:30h *Redescubriendo el pasado a través del trabajo multidisciplinar: el caso del Forau de la Tuta (Artieda, Zaragoza).* L. Íñiguez, P. Uribe, J. Angás, J.Á. Asensio, M. Navarro, E. Ariño, Ó. Lanzas, C. Concha, M.A. Magallón. Universidad de Zaragoza, Institut Ausonius CNRS-Université Bordeaux Montaigne, Universidad de Salamanca.

17:00h *Recent Trends and Applications of Artificial Intelligence in Archaeology.* Cristian Iranzo. Universidad de Zaragoza.

17:30h *Automatización y visualización avanzada del patrimonio cultural en entornos web.* Gonzalo Ruiz. BIFI-Universidad de Zaragoza.