Digital Strategies for Endangered Cultural Heritage

Forthcoming INTERSPECIES

The fragmentation of scientific disciplines operating on Cultural Heritage highlights the centrality of an international collaboration to enhance the training of Integrated profiles, as INTERSPECIES, made aware of the integrated process of managing and planning programs of identification, quantification, intervention, and safeguard on Cultural Heritage frameworks in Europe.

**WHEN?** 6th-11th September, 2021

Lectures and working group activities will take place every day, with the final presentation on Saturday morning (tot 40h), regarding 3 Topics: DATABASES AND STRUCTURES, PROJECT AND RESTORATION, SERVICES AND HERITAGE

**WHO?** Ph.D. Students and Early-Stage Researchers Postgraduate, Master Degree candidates

ONLINE EVENT - FREE ATTENDANCE (Inscription required)

3 ECTS + 2 ECTS EXTRA ACTIVITY (optional)
THE SCHOOL’S OBJECTIVES

The Summer School aims to introduce a Cross-fertilisation of Competencies among institutions and partners within the scientific fields and disciplines involved (digital survey, numerical computing, structural evaluation, technological intervention, restoration design, visual communication, and service marketing). It aims to address the necessary background for advanced strategies on safeguard policies for Cultural Heritage.

AIMS

The School aims to promote the development of an integrated awareness and interdisciplinary skills among Young Researchers from the shared experiences of European institutions, brought to the school by the international organizing team of Expert Researchers and by the Invited Lecturers. Main contents will provide:
- holistic knowledge from the sharing of international best practice cases related to documentation, conservation, and promotion processes for Cultural Heritage, focusing on the centrality of integrated skills and disciplines of Cultural Heritage survey, analysis, and preservation.
- basic skills in integrated technologies, computing methods, tools for the survey and analysis of Cultural Heritage safety, principles of interaction between conservation purposes, and Cultural Heritage social and marketing opportunities based on digital databases and Digital Twins.
- coordination skills, research team building, and the ability to construct opportunities of research integration on monitoring tools and methods for the management and promotion of Cultural Heritage, in particular in expeditious conditions.

GOALS

The goal of the School is to orient and increase the ability of participants to apply an integrated approach on safety and conservation management for Cultural Heritage, enhancing Digital Strategies as non-invasive and widely disseminable practices.

The skills and knowledge acquired in the School will introduce a joint approach on Cultural Heritage, to implement specific themes regarding emergency and preservation management. Through the combination of applied science and entrepreneurial knowledge, the School will guide into strategies of development for digital products and services for cultural, economic, and social benefits.

Forthcoming INTERSPECIES… is here!
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The School is supported by the European network INTERSPECIES, composed by the partnership of 7 academic institutes of excellence:

**University of Pavia (UNIPV) - Italy**
UNIPV is one of the world’s oldest academic institutions, Top 15 among all Italian Universities, developing research in the areas of Architectural Survey, Technology, Restoration. Among the laboratories involved in the activities of the School: DaDa-LAB. (Drawing and Architecture DocumentAction) and PLAY (Photography and 3D Laser for virtual Architecture LaboratorY) laboratories.

**Technical University of Munich (TUM) - Germany**
TUM institutional strategy is focused on strengthening the excellence of disciplinary core competences in research, teaching and learning on computational methods. It initiates growth-oriented start-ups and assists its entrepreneurs in building new companies (TUM entrepreneurship). TUM is member of the EuroTech Universities Alliance (DTU, TU/e, EPFL, LX, The Technion and TUM).

**Ecole Polytechnique Fédérale de Lausanne (EPFL) - Switzerland**
EPFL is one of two technical federal universities in Switzerland. Its mission comprises training, research and technology transfer, investigating the seismic behaviour of reinforced concrete and unreinforced masonry buildings.

**Universitat Politècnica de València (UPV) - Spain**
UPV is a state public institution of higher education, with numerous departments, institutes and centers for artistic, technical and scientific research. The Department of Architectural Constructions is responsible for the area of research on architectural constructions.

**Cracow University of Technology (PK) - Poland**
PK faces challenges and opportunities of cooperation with local government authorities, advising on architectural projects, urban design and heritage protection issues. It has been accredited by the Accreditation Committee at the Royal Institute of British Architects (RIBA).

**The Cyprus Institute (CYI) - Cyprus**
CYI is an accredited, degree granting institution of higher education, with a wide range of fix and mobile laboratories for in situ analyses covering non-destructive and non-invasive chemical/physical investigations, 3D documentation for archaeological sites.

**Europa-Universität Viadrina (EUV) – Germany**
EUV, within the Chair of Strategies for European Cultural Heritage, is focused on multidisciplinary aspects of Cultural Heritage preservation, heritage popularization and revalorization, heritage in society, management and marketing of heritage conservation services.
COMMITTEES AND PARTNERS

Organizing Committee
Raffaella De Marco
Sandro Parrinello
Katrin Beyer
Sorin Hermon
Luís Manuel Palmero Iglesias
Izabella Parowicz
Ernst Rank
Jolanta Sroczyńska

University of Pavia
Ecole Polytechnique Fédérale de Lausanne
The Cyprus Institute
Universitat Politècnica de València
Europa-Universität Viadrina
Technical University of Munich
Cracow University of Technology

Scientific Committee
Maurizio Marco Bocconcino
Elisa Bonacini
Łukasz Bratasz
Francisco Javier Cárcel Carrasco
Chiara Casarotti
Livio de Luca
Vincent Détalle
Stefan Kollmannsberger
Marco Morandotti
Franco Niccolucci
Assunta Pelliccio
Andrea Penna
Giammarco Piacenti
Francesca Picchio
Alessandro Reali
Cettina Santagati
Massimiliano Savorra
Ilaria Senaldi
Francesco Taccetti

Politecnico di Torino
IDEx, University of South Florida
Polish Academy of Sciences
Universitat Politècnica de València
EUCENTRE
CNRS - Centre national de la recherche scientifique
C2RMF
Technical University of Munich
University of Pavia
PIN, University of Florence
University of Cassino and Southern Lazio
University of Pavia
Piacenti SpA
University of Pavia
University of Pavia
University of Catania
University of Pavia
EUCENTRE
INFN - National Institute for Nuclear Physics

Contact Secretariat
interspecies.school@gmail.com

Partners and Facilities

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Piacenti S.p.A.
4CH
AND NOW...
FOLLOW US AND GET INVOLVED!
WHO?

Ph.D. Students, Researchers, Professionals, Postgraduate and Master degree candidates in Architecture, Engineering, Heritage Sciences, Economies and Social Sciences related to Cultural Heritage and Endangered Heritage are welcomed. Basic expertise in architecture and engineering, digital data, as well as involvement in administration policies, promotion practices, and management programs on Cultural Heritage sites are suggested.

WHAT?

Advanced skills on digital platforms and tasks for Cultural Heritage will be given during the School, within open lectures on Cultural Heritage best practices and technical demonstrations on Cultural Heritage digital data workflows. Some demonstrations will regard:
- Non-invasive damage mapping from point clouds
- Information database systems and GIS territorial platforms
- City Information Modelling from Open Access data
- On-site restoration experiences and activities in the professional sphere
- VR smart fruition for Cultural Heritage
- Prevention and recognitory activities in emergency sites.
- Crowdsourcing data collection for heritage monitoring by the communities

At the end of the School, a certificate of participation in the International Summer School will be released, proving the attendance (40h) and the achieved ECTS (3 ECTS).

Extra activity (2 ECTS) can be followed by students: a paper on the final assignment results, which will be included in the School Handbook (scientific publication with ISBN).
WHEN?
The Summer School will be held on 06<sup>th</sup>-11<sup>th</sup> SEPTEMBER 2021 in ONLINE E-LEARNING mode.

In the Summer School, each group will be assigned to an international Cultural Heritage site, e.g. interested in UNESCO practices or national/European programs. For each site, the following key points will be developed within peer-learning sessions and working group activities:

- Site analysis and Safeguarding Objectives
- Knowledge and Intervention purposes
- Methods and application of documentation data within Digital Strategies
- Project, conservation, marketing, and social promotion opportunities within EU network.

Working group Activities
Each participant will be included in an international working group, supporting its background with the new skill presented in the Summer School to shape a common experience of Cross-Fertilization of competence to project intervention and preservation measures for Cultural Heritage.

Personal knowledge from students, experimentation on presented technical practices from Ph.D. lecturers, cutting-edge suggestions from Experienced Researchers will be integrated into the team working activities.

The team working activities will be guided by the supervision of selected tutors, and they will be revised by the organizing committee of the Summer School.

Final Assignment
The final assignment of each group will be presented on day 6. It will reflect the development of the research key points for each Cultural Heritage site, within a presentation that can include multsource information and elaborates, such as multimedia, digital drawings, 3D models, application of design programs, social and marketing strategies.
Candidates must apply for the selection by 23:00 CET of July 25th, 2021 by submitting via Google Module the following documentation:

1. the Google application form filled in;
2. a copy of the identity card, passport, or other identification documents;
3. Scientific and/or Professional Curriculum Vitae [.pdf] max 3 pages. Personal publications are required to be selected and provided as max. 3 references.
4. Cover letter (max 1 page) explaining:
   - specialization areas and motivation for participating in the themes of the school;
   - achieved skills and short/medium-term expectations from the attendance to the school;
   - scientific-professional strengths, particular experiences, knowledge, and skills highlighted within the strategic themes of the school.

Documents 3 and 4 must be dated and signed. Document 3 is required to explicitly contain the reference:

“In compliance with Regulation EU 2016/679 “General Data Protection Regulation – GDPR” and the Italian D.Lgs. 30 June 2003 n.196 “Code regarding the protection of personal data”, I hereby authorize the recipient of the application to use and process my personal details for the purpose of recruiting and selecting staff.”

Selection Criteria

The Organizing Committee will evaluate and select the received applications on the following criteria:

1. Evaluation of academic qualifications 10/60
2. Relevance of CV experience and skills related to the themes of the School 30/60
3. Expected interests and participation purposes presented in the Cover Letter 20/60

The selection of candidates will be done by July 2021. The minimum number of participants required for the activation of the School is 10, the maximum number is 25. In case of higher submissions, a motivational interview (in English language) will be foreseen.