European Heritage Awards / Europa Nostra Awards (2026)
1839-Education, Training and Skills 3. Education, Training & Skills

VbgxdWQK

HIMASS - International summer school on Historic Masonry Structures

Entry details

General information

Main country of application: Italy

In case there are other official partners involved in the project, please list the country(ies) they come from

> Spain

Brief description of the project

> The International Summer School on Historic Masonry Structures is an educational initiative supported by academic institutions, municipalities, and non-profit associations. The program takes place every year and is designed to bring together students and experts from Europe, with the aim of recovering knowledge related to ancient masonry structures, providing a historical and theoretical framework fundamental to understanding the structural behaviour of architectural heritage. Since its institution in 2018, HIMASS has hosted seven editions, training over 150 students from more than 20 EU and non-EU countries, offering practical field activities on real case studies and promoting international collaboration in heritage conservation.

Start date of the project: 2018-06-23

Completion date of the project/ initiative: ongoing

Website(s) of the project/nominee: www.himass.org

Does the site or heritage in question have national/regional/ local cultural heritage designation or protection status in its country?	Yes

If yes, please specify:

> In each edition of the summer school, four monuments are examined, generally churches, but also aqueducts, towers, or historic buildings that are protected and designated as cultural heritage of the country. Therefore, in the seven editions of the school, a total of 28 buildings that are part of the cultural heritage have been surveyed, studied, and analyzed.

Is the project focused on or taking place in heritage included on the UNESCO World Heritage List, either as an individual site or as part of a larger World Heritage property? If so, please specify which one.

> The 2023-24 editions took place in the historic center of Segovia, a World Heritage Site since 1985. Previous editions were held in Anagni and at the monastery of Santa Scolastica in Subiaco, which have applied to be included in the UNESCO World Heritage List.

Is the project focused on or taking place in a heritage designated as a European Heritage Label? If so, please specify which one.

> No

If relevant, is the site/heritage accessible to the public?	Yes

What steps have been taken to ensure that the site / project is inclusive and accessible to as wide an audience as possible?

> Summer school students are generally accommodated in a convent where they enjoy a frugal but convivial experience that is inclusive and accessible to all.

Please indicate whether your project falls under the subcategory of Education, Training, or Skills (select one type only, as applicable):	✓ Training

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Contact details

Name of the entrant	Gianmarco de Felice
Entrant's position	Professor
Organisation of the entrant	Roma Tre University
Address of the entrant	via Vito Volterra 62 - 00146 Rome Italy
Email address of the entrant	defelice@uniroma3.it
Please confirm entrant's email	defelice@uniroma3.it

Telephone of the entrant (fixed line)	+390657336268
Telephone of the entrant (mobile number)	+393290570705
Website of the entrant	https://www.romatrestrutture.eu/
Organisation of the owner	Roma Tre university
Name of the project leader	Gianmarco de Felice
Project leader's position	Founder and professor of the summer school
Organisation of the project leader	Roma Tre University
Email of the project leader	defelice@uniroma3.it
Telephone of the project leader	+393290570705

Other relevant participants

> Prof. Maurizio Angelillo, University of Salerno, co-founder and professor of the summer school
>
> Prof. Santiago Huerta, Universidad Politécnica de Madrid, co-founder and professor of the summer school

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Concise summary

Concise summary

> Ancient structures were built following design rules that are not available anymore. The design was based on geometry instead of mechanics, focusing on the equilibrium among the parts of the building rather than on the strength of the materials. The change in perspective of design rules from antiquity to current regulations is one of the reasons for the difficulty in providing an adequate safety estimate of historic buildings and the main reason for improper, unnecessary and in some cases harmful interventions.
>
> The International Summer School on Historic Masonry Structures HIMASS aims at covering this gap and recovering the knowledge of ancient masonry structures, providing a fundamental historical and theoretical framework to understand the structural behavior of masonry structures.
>
> The school was conceived jointly by Roma Tre University, Polytechnic University of Madrid and University of Salerno. Since the first edition in 2018, HIMASS has run for seven editions, training about 150 students from more than 20 countries in Europe and beyond. This remarkable international participation demonstrates the school's very effective European relevance in heritage preservation.
>
> HIMASS offers a beautiful learning experience that combines rigorous academic studies with hands-on fieldwork. The participants are directly involved with case studies in order to face at real problems in heritage preservation. The program content is designed to cover the various aspects related to construction history, digital surveying, structural analysis and preservation. Working on real structures helps in fostering the link between the different disciplines and sharing a common alphabet in which scientific approach and technological innovation are guided and contaminated by history and humanistic thought.
>
> HIMASS also provides an environment for international collaboration and sharing of knowledge. The program encourages teamwork which not only helps in developing technical skills but also in building strong relationships,

towards the creation of an international community interested in the fundamental knowledge of the behavior of historic masonry structures with the awareness that our heritage should be respected, safely preserved and handed down to future generations.

Objectives and work undertaken

Aims and objectives of the project/initiative.

The summer school provides an immersive experience in the world of historical masonry structures, starting from their history and construction rules, towards actual tools for digital survey and assessment strategies. Teachers and students are involved in an intense activity of study, analysis and discussion. HIMASS aims to raise the level of understanding of historic structures in order to respond appropriately to the challenge related to the preservation of cultural heritage through sustainable and scientifically based practices.

Key objectives include:

- Encouraging interdisciplinary learning: HIMASS combines knowledge in architecture, engineering, restoration, construction history, and digital surveying in order to promote collaborative methods in heritage conservation.

- Integrating theoretical frameworks with practical application: Participants apply theoretical concepts to real-world problems and challenges through the examination of actual case studies, thereby bridging academic learning with experiential practice.

- Forming an international network: The program offers a unique opportunity for students, academics, and practitioners with diverse backgrounds—both cultural and vocational—to exchange ideas, disseminate good practices, and establish long-term professional networks.

- Preparing future professionals: The course curriculum of HIMASS guarantees that participants gain advanced competencies in design principles and structural assessment of historical masonry structures, construction methods, and preservation.

- Encouraging research and practice: HIMASS aims at improving the research and practice in the structural assessment of historic masonry building.

- Contributing to heritage sustainability: HIMASS focuses on scientifically sound solutions for the sustainable preservation of historic structures and the protection of cultural heritage for future generations.

Any historical and technical research undertaken for the project/initiative.

The Summer school is the result of research and professional activities in the different fields of construction history, structural analysis and seismic behavior of monuments, as evidenced by the scientific production of the three proponents.

Each case study, generally a church or another historic building, undergoes a historic research and a digital survey, to provide the students the necessary documentation to carry out the study and the assessment of the monument. By today, 28 monuments were studied. The study and research activities carried out in the Summer School related to the case studies allowed the publication of several scientific papers with the participation of the students and researchers involved (see, for instance the special issue of the journal *Structural Magazine* Vol. 247, 2023 ISSN 2282-3794 dedicated to the Summer School).

Activities carried out and stages of implementation of the project/initiative.

Over the past seven editions, the Summer School has brought together participants, teachers and students, from all over the world, with the common goal of understanding historical masonry constructions. The scheme comprises two weeks of intensive work combining theory classes with practical work applied to the study of specific buildings. These historical vaulted buildings are analysed from three main points of view: their geometry, their construction

and their stability. At the end of the course, the participants, who have worked in groups, present the results of their studies. The presentation is followed by discussion and debate.

The detailed organization is described hereafter.

1. Planning and organization

The program begins with the selection of case studies, the organization of the lectures and invited speakers, and the logistics of conducting the workshop and fieldwork.

2. Selection

Applicants were selected based on their academic background, professional experience, and interest they demonstrate through a motivation letter for heritage conservation, ensuring a diverse group that fosters mutual collaboration.

3. Activities

The program combines academic lectures, on-site surveys, and practical sessions focusing on real case studies. Lecture topics vary and cover construction history, structural analysis, design principles, and conservation techniques.

4. Fieldwork

This is hands-on fieldwork in selected historic buildings, in which students tackle real conservation problems. It includes structural assessments, material analysis and documentation with digital survey tools.

5. Collaborative efforts

Teamwork is promoted through group projects in which participants study the monument explain the construction changes that have occurred and assess its structural condition. This creates an opportunity for interdisciplinary communication and problem solving.

6. Exhibition and distribution

The final phase involves presenting project results to colleagues and academic staff, encouraging feedback and discussion. Participants are also encouraged to share their findings and exchange information within the broader heritage conservation community.

Challenges or problems encountered and solutions found to overcome them.

The first challenge concerns the complex logistics required to coordinate a program that combines academic lessons, practical fieldwork, and interdisciplinary collaboration between different institutions. In response to this, HIMASS capitalizes on robust partnerships with academic entities and municipal authorities and the bodies responsible for the protection of cultural heritage, to facilitate effective planning and optimal resources distribution.

Another challenge is keeping programs affordable for participants while ensuring quality. HIMASS meets this by mobilizing co-funding from partners, reducing the reliance on participant fees to ensure inclusivity.

The variety of cultural and professional backgrounds of participants sometimes acts as a challenges source with regard to communication and collaboration. HIMASS helps to create a supportive learning environment by focusing on collaboration, group activities that facilitate sharing of perspectives and learning from each other.

By concentrating the efforts on collaboration, fundraising, and inclusion, HIMASS continues to address such challenges appropriately.

European significance

European significance of the project/initiative/nominee.

> Since the first edition in 2018, HIMASS has run for seven editions, training about 150 students from more than 20 Countries in Europe and beyond. This remarkable international participation demonstrates the school's very effective European relevance in heritage preservation.
>
> The results of the study and structural assessment on the case studies were shared with local institutions and municipalities provide the digital survey and the result of the structural assessment of the monument as a contribution to the preservation of architectural heritage. In several editions of the school, the final reports of the project activities were revised and integrated, giving rise to scientific publications in journals (see, for example, the special issue of the journal *Structural Magazine* Vol. 247, 2023 ISSN 2282-3794 dedicated to the Summer School) to share the experiences gained with the international scientific community.

Results and impact

Summary of the main results achieved and knowledge that has been gained. List the ways that the project/initiative contributes to the preservation and/or enhancement of the historical, cultural, environmental, educational and/or social values of the heritage in question. Mention the project's impact on conservation policy and practice, if any.

> The main result achieved in the summer school is the recover of the knowledge of historic construction and traditional design in a modern framework of structural analysis.
>
> The school also succeed in fostering new synergies among different aspectes of historic bulidings, integrating tradition with innovation, inspiring new approaches, ensuring future professionals can safeguard and critically analyze architectural heritage.
>
> HIMASS is contributing to the development of a community of scholars and researchers that deals with the analysis of historical masonry structures, with the awareness that our heritage can be safely preserved and handed down to future generations. It fosters social inclusion by targeting students from diverse backgrounds, creating a platform for international collaboration among institutions and countries from different cultural and political contexts. This interdisciplinary training, while emphasizing the importance of preserving cultural heritage, also empowers students to engage with complex challenges, contributing to the advancement in sustainability, digital transformation, and cultural heritage protection.
>
> Thus, the following specific results of this initiative were set to face the above-mentioned gaps by:
>
> 1. Promoting interdisciplinary approaches using advanced teaching methodologies in conservation education;
>
> 2. Restore knowledge about historical structures and traditional construction methods;
>
> 3. Integrate the advancements in digital techniques and advanced technologies in conservation practices;
>
> 4. Strengthen international collaboration by building an international network of academic and professionals.

Aspects of the project that can be considered innovative within its area or field.

> The most innovative aspect of this summer school is its emphasis on recovering knowledge and traditions related to masonry construction, developed over the centuries. Only thanks to this knowledge, which leads to respect, will it be possible to face the challenges of the future and hand down these buildings to future generations. The recognition that the current elastic analysis is not applicable to masonry is the one of the innovative aspect of this course, that overcome the serious challenge in our profession since linear elastic finite element analysis do not provide reliable results in historic masonry. For example, an arch having the double thickness has similar stress, while we know that the thicker arch has greater safety.

> The school also provides innovative tools for digital survey, integrated approaches for strutural design and more advanced tools for assessment based on equilibrium, limit analysis and discrete element modelling.

Steps taken to reach people who have not previously interacted with the site/project. This might include youth, local communities, non-traditional audiences, people with disabilities, etc.

> The participation of youth, community, non-traditional audiences and/or people with disabilities is encouraged and group organizing in the planned learning activities the interaction between different competencies and different skills enables their full participation without marginalization or limitation of any kind.

Participation in the initiative (number of participants/audience/users per year and/or, in the case of websites and digital platforms, information regarding visitor numbers and online interaction).

> The school is designed for a small audience (20-25) of students plus senior auditors. The target audience is PhD students in the field of Structural Engineering , History of Construction, Preservation of cultural heritage, but master's students specialized in architecture or engineering with a focus on historic structures or professionals working in the field of restoration have also participated.
>
> In the last edition that took place in Oristano, Italy, from August 31 to September 14th 2025, the school had 42 applications among which 25 (the maximum number compatible with the facilities) were admitted and 22 were finally enrolled. The course lectures (about 40 hours) were provided by eight professors from Spain and Italy, invited lectures (about 16 hours) were delivered by thirteen professors coming from Europe (Portugal, Italy, Switzerland) Lebanon, USA and Australia, tutorship was provided by 15 young researchers coming mainly from Europe (Italy, Spain, Croatia, Switzerland, UK).

Environmental, social, and economic sustainability of the project (e.g. contribution to climate action and environmental protection; measures to ensure long-term financial sustainability or future viability; benefits for people and communities, where relevant).

> Historic buildings are an emblematic example of sustainable techniques and materials with low environmental impact, excellent resilience and adaptability. Their mechanical functioning as structures that are resistant by form rather than by material strength has made it possible to reduce the thickness of structural elements and thus the amount of material used. Their preservation allows our heritage to be handed down to future generations while reducing the emissions that the demolition and reconstruction of new structures would entail. In addition, a deep understanding of the behavior of ancient structures can be a stimulus for the design of new form-resilient structures, which are now accessible again thanks to digital printing, the recovery of ancient building technologies in a contemporary context, and the use of traditional materials that are more sustainable and resilient.

Dissemination of the project's results and knowledge gained and any outreach or educational activities.

> Those who would acquire a thorough knowledge of the arch will never get it from books alone, and we cannot pretend to give it them. We have only shown the alphabet, with the aid of which they may spell out their learning from actual structures and the practical experience that is gained from real work. (*The Statics of Bridges, 1861)* Throughout the course there are continuous discussions on how to analyse these complicated constructions. More than 150 students have passed through the school over the last seven years. What impact this may have cannot be known. The greatest result gained is to sow doubt, to draw attention to effective characteristics of historic constructions.
>
> The involvement of local administrations, conservation authorities, and communities in the towns that hosted the summer school (Anagni, Segovia, Oristano) fostered a virtuous circle of interest and awareness of architectural heritage.

Contribution to intercultural dialogue and to the protection of cultural diversity.

> The summer school is designed to encourage participation of people from all Countries and promote intercultural dialogue through group work on monuments which entails direct interaction between students and through

cohabitation, as all students and most tutors and professors are housed in a convent and have lunch and dinner together.

The protection of cultural diversity is promoted through the following actions:

- economic: we provide support and different economic treatment for people from less developed countries;
- participatory: we are committed to bringing diverse ethnic groups and genders to the School;
- heritage: the diversity of cultural traditions that are studied and monuments that are considered as case studies;
- multicultural: the variety of ethnic groups and their traditions that are made visible.

Transferability of the initiative to other contexts and its scalability potential.

From the perspective of regional location, this initiative has the potential to be transferred to other contexts, as demonstrated by the experiences carried out in Italy and Spain in the previous editions of the School. The participation of tutors and professors from several countries in Europe ensures the transferability of the initiative.

From the persepctive of knowledge, there is a strong cross-disciplinary content that can be usefully transferred from the area of preservation to the design of new sustainable constructions made with low-impact materials.

We also believe that the experience of this School is a fundamental step towards the institution of master on structural assessment and preservation for both architects and engineers. To this end, the proponents participated in a call for an Erasmus Mundus Design Measures and get a preliminary grant (proposal n. 101238842 – Chape - Construction History and Preservation Engineering) for preparing a proposal.

Costs of the project/initiative

Costs of the project (in euro), financial and management arrangements, funding partners and/or the type of funding.

The cost of HIMASS varied between 36.000 and 64.000 euro per year as outlined hereafter:

- Inspection, selection and digital survey of Case Studies: 2.000-5.000 €
- Lodging and meals of the students (20-25): 15.000-20.000 €
- Lodging and meals of the teachers and tutors (15-25): 8.000-15.000 €
- Lodging and meals of the guest lecturers (3-8): 1.000-3.000 €
- Materials and services for the operation of the school (printing of flyers and booklets, transportation costs for study visits, purchase and transportation of materials for the vaulting workshop): 3.000-6.000 €
- Travels of guest lecturers: 2.000-5.000 €
- Secretary work (website updates, registration management, logistical organization for travel, food, and accommodation for students, tutors, and professors, secretarial support during the summer school): 5.000-10.000 €

The funding was provided by Students' fees: 20.000-25.000 € and from partner universities (15.000-40.000 €) as follows: The Massachusetts Institute of Technology (2018-19); University of Salerno (2018-22); Roma Tre University (2018-2022); PLINIUS Study Centre for Hydrogeological Volcanic and Seismic Engineering (2018-22); Technological District for Cultural Heritage of the Lazio Region (2021-22), Instituto de Empresa (2024), University of Sannio (2024-25).

Funding provided by the European Union or the EEA/Norway Grants (including programme, year and amount of the Grant), if any.

NO funding was provided by the European Union or the EEA/Norway Grants.

Additional information

How would winning the European Heritage Award / Europa Nostra Award benefit you, your project and/or your organisation?

> Winning the award would represent a great recognition for the Summer School and the universities supporting the Summer School to testify their active involvement in the cultural heritage preservation, with beneficial effects on its attractiveness and the number of potential students. Moreover, the award would help in establishing a wider European network with universities cultural associations and local communities, as an important step for the success of the next editions of the summer school.

In case this submission is the winner of the Grand Prix, what will the monetary award be used for?

> The monetary award derived from the Grand Prix prize will be invested as funding for subsequent editions of the International Summer School on Historic Masonry Structutres - HIMASS

In case this submission is the winner of the Grand Prix, who will be the recipient of the monetary award?

> In the event of winning the Grand Prize, the recipient of the monetary prize will be Roma Tre University as the institution to which the applicant belongs.

How did you find out about the European Heritage Awards / Europa Nostra Awards?	Europa Nostra website
Is this the first time that this entry has been submitted to the European Heritage Awards / Europa Nostra Awards?	No
If it is a resubmission, write the registration number and title of the previous submission here:	1061 - HIMASS - International Summer School on Historic Masonry Structures
On a scale of 1-10, how satisfied are you with this online submission form?	✓ 9

Do you have any comments on the application form or suggestions that you would like to share with us?

> no

By submitting your data, photographs and other material to the European Heritage Awards / Europa Nostra Awards you agree to the processing and sharing of your data in accordance with Europa Nostra's Privacy Policy. Please check the box to indicate you agree with the Privacy Policy.	✓

Log in to european-heritage.awardsplatform.com to see complete entry attachments.



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HIMASS2023 - F... 1.5 MiB



HIMASS2023 - F... 3.7 MiB



HIMASS2023 - ... 4.2 MiB



HIMASS2023 - I... 355 KiB



HIMASS2023 - I... 857 KiB



HIMASS2023 - L... 772 KiB



HIMASS2023 - L... 658 KiB



HIMASS2023 - L... 4.1 MiB



HIMASS2023 - ... 1.3 MiB



HIMASS2024 - C... 873 KiB



HIMASS2024 - C... 910 KiB



HIMASS2024 - ... 882 KiB



HIMASS2024 - E... 370 KiB



HIMASS2024 - F... 1.0 MiB



HIMASS2024 - F... 354 KiB



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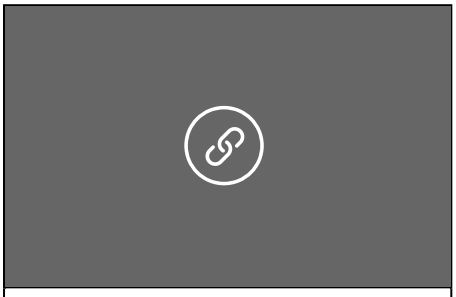

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