



## Main subject

The School is organised within the STORM project (Safeguarding Cultural Heritage through Technical and Organisational Resources Management), financed by the EU Commission in the **Horizon 2020 program**. STORM proposes novel predictive models and improved non-invasive and non-destructive methods of survey and diagnosis, for effective prediction of environmental changes and for revealing threats to cultural heritage sites. An integrated system featuring novel sensors (intra fluorescent and wireless acoustic sensors), legacy systems, state of the art platforms (including LiDAR and UAVs), offering applications and services over an open cloud infrastructure.

During the course the main results achieved by the project in terms of research, experimentation and application will be illustrated.

## Training goals

The STORM Academy has the aim of training professional figures or students, by the implementation of both **onsite training** activities and **lessons**. The added value of the Academy is the interdisciplinarity between the different fields, and the cooperation between different areas of knowledge involved in the Cultural Heritage conservation and management. The provided training is the direct consequence of the achievements gained during three years of research project and test in the **five** project's **pilot sites**. The lectures of the course will explore the relations between climatic change and risk for Cultural Heritage, the technologies available to predict hazardous events and limit damages and the operational procedures in case of emergency. Part of the lessons will be based on the use of the innovative platform developed and provided within the STORM project.

## Organising committee

**Stefano Marsella** (CNVVF) - Coordinator, **Ulderico Santamaria** (UNITUS), **Vanni Resta** (Kpeople), **Giulia Governatori** (UNITUS).

## Location

**Università della Tuscia.** Via Santa Maria in Gradi, 4, Viterbo, Italy

**Istituto Superiore Antincendi.** Via del Commercio, 13, Rome, Italy

# STORM ACADEMY 2019

## Teaching organisation

STORM Academy is articulated in **three sections**. Each session lasts **six days**. The calendar is defined to have **frontal lectures** close to each onsite exercise within the five project's pilot sites. Some lectures will be made with the teacher remotely connected. At the end of the Academy Università della Tuscia will award to the attendees **5 credits** valid within the Italian University System (CFU, Crediti Formativi Universitari DM 270/2004).

## Learning evaluation

At the end of the STORM Academy a final evaluation of attendees' learning will be based on a multiple choice test.

## Admissions

STORM Academy is implemented in a framework of a European funded project the participation is totally **for free**. However, there is a **limit of available places** base on subscription time and study title. The attendance is open to **students** in Engineering, Restoration, Architecture, Archaeology, Art History or to **professionals**, working in any Public or Private Entities in the field of CH management, protection, conservation or restoration.

## Contacts

Information about the course and **subscription** can be requested sending an e-mail to Giulia Governatori: [governatori@unitus.it](mailto:governatori@unitus.it)



### Associated Partners



<http://www.storm-project.eu/>



# STORM ACADEMY 2019

## Teachers

- **Alcides Fuschini Bizarro**, Município de Grândola (PT)
- **Francesca Boldrighini**, Soprintendenza Speciale per il Colosseo, il Museo Nazionale Romano e l'Area Archeologica di Roma (IT),
- **Gianluca Cantoro**, Foundation for Research and Technology, Hellas (GR),
- **Maria Concetta Capua**, Nova Conservacao (PT),
- **Patrikakis Charalampos**, University of West Attica (GR),
- **Rosmarie De Wit**, Zentralanstalt für Meteorologie und Geodynamik (AT)
- **Paolo Dolci**, Corpo Nazionale dei Vigili del Fuoco (IT),
- **Gabriele Giunta**, Engineering Ingegneria Informatica (IT),
- **Giulia Governatori**, Università della Tuscia (IT),
- **Emilia Gugliandolo**, Engineering Ingegneria Informatica (IT),
- **Ana Patricia Magalhes**, Troiaresort – Investimentos Turísticos, S.A. (PT),
- **Paolo Dolci**, Corpo Nazionale dei Vigili del Fuoco (IT),
- **Stefano Marsella**, Corpo Nazionale dei Vigili del Fuoco (IT),
- **Marcello Marzoli**, Corpo Nazionale dei Vigili del Fuoco (IT),
- **Filipa Mascarenhas Neto**, Direção-Geral do Património Cultural (PT)
- **Michael Nevell**, University of Salford (UK),
- **Fabio Perossini**, Kpeople (UK),
- **Mohammed Ravankhah**, University of Stuttgart (GE),
- **Vanni Resta**, Kpeople (UK),
- **Maria João Revez**, Nova Conservação (PT),
- **Ulderico Santamaria**, Università della Tuscia (IT),
- **Anastasia Tzigounaki**, Ephorate of Antiquities of Rethymno, Hellenic Ministry of Culture and Sports (GR),
- **Eren Uckan**, Bogazici University and Kandilli Observatory (TR)





# STORM ACADEMY 2019

## 1<sup>st</sup> Session

| Date    | Name                            | Title  | Hours | Place  |
|---------|---------------------------------|--|-------|--------|
| 24/1/19 | <i>Gabriele Giunta</i>          | The STORM project and protection of CH: state of the art and goals   | 1     | Unitus |
|         | <i>Ulderico Santamaria</i>      | Principles and main practices adopted for prevention, quick assessment, recovery   | 2     | Unitus |
|         | <i>Rosmarie De Wit</i>          | Observed and predicted climate change in Europe  | 2     | Unitus |
| 25/1/19 | <i>Francesca Boldrighini</i>    | The Baths of Diocletian, a complex site: history, characteristics, conservation problems - The Storm Project at Baths of Diocletian: motivations and solutions | 2     | Unitus |
|         | <i>Filipa Neto</i>              | Identification of gaps in CH policies and future approaches to improve regulations   | 2     | Unitus |
|         | <i>Maria Concetta Capua</i>     | Methodology and use of knowledge coupled with the STORM platform.  | 2     | Unitus |
| 28/1/19 | <i>Stefano Marsella</i>         | Protection of cultural buildings and sites from vegetation fires   | 1     | ISA    |
|         | <i>Emilia Gugliandolo</i>       | A toolkit for supporting CH users during the prevention and intervention process   | 2     | ISA    |
|         | Exercise - Terme di Diocleziano |  | 3     |        |
| 29/1/19 | <i>Paolo Dolci</i>              | Earthquake damages: shoring procedures in emergencies scenarios  | 1     | ISA    |
|         | <i>Marcello Marzoli</i>         | Gathering and sharing data in emergency between rescue services and cultural heritage protection bodies  | 1     | ISA    |
|         | <i>Charalampos Patrikakis</i>   | Introduction on integrated platform and its benefit - Description of sensors used in STORM   | 2     | ISA    |



# STORM ACADEMY 2019

## 2<sup>nd</sup> Session

| Date    | Name   | Title   | Hours | Place  |
|---------|--|---|-------|--------|
| 7/2/19  | <i>Eren Uckan</i>  | Development of integrated structural health monitoring and earthquake risks management systems for historical structures: the STORM approach    | 2     | Unitus |
|         | <i>Ulderico Santamaria, Giulia Governatori, Stefano Mastrostefano, Emanuele Dell'Aglio</i> | Protection measures on CH against environmental agents. FBG sensors, installation, data collection and data analysis                            | 2     | Unitus |
|         | <i>Mohammed Ravankhah</i>  | Integrated approach to vulnerability and risk assessment for cultural heritage sites  | 2     | Unitus |
| 8/2/19  | <i>Maria Concetta Capua</i>  | <i>view of cost-effective approach and compare it with Storm</i>  | 1     | Unitus |
|         | <i>Maria Joao Revez</i>  | Improving risk control decision making: Cost-effectiveness analyses of heritage conservation interventions.                                     | 4     | Unitus |
| 11/2/19 | <i>Fabio Perossini</i>   | How to get further research, site sustainability and business opportunities out of a resilient policy for cultural sites.                       | 2     | ISA    |
|         | <i>Anastasia Tzigounaki</i>  | Climate change impact: From current practices and legislation towards an appropriate management response through monitoring and risk assessment | 3     | ISA    |
| 12/2/19 | <i>Sabine Landstatter</i>  | Ongoing archeological studies, conservation and protection works in the Ephesus site .  | 3     | ISA    |
|         | <i>Maria Concetta Capua</i>  | Methodology and use of knowledge coupled with the STORM platform.   | 2     | ISA    |




# STORM ACADEMY 2019

## 3<sup>rd</sup> Session

| Date    | Name                          | Title  | Hours | Place  |
|---------|-------------------------------|--|-------|--------|
| 21/2/19 | <i>SAna Patrícia Magalhes</i> | Disaster Risk Management at the Roman Ruins of Troia. The experience provided by STORM.                                      | 1     | Unitus |
|         | <i>Alcides Bizzarro</i>       | Water and environment agents damages protecting procedures in emergency  | 2     | Unitus |
|         | <i>Fabio Perossini</i>        | How to get further research, site sustainability and business opportunities out of a resilient policy for cultural sites.    | 2     | Unitus |
| 22/2/19 | <i>Robert Williamson</i>      | The impact of weather events, augmented by climate change, on cultural heritage, monitoring and management: A UK perspective | 2     | Unitus |
|         | <i>Nevell Mike</i>            | <i>cultural heritage sites to cope with slow onset climate chang</i>   | 2     | Unitus |
|         | <i>Gianluca Cantoro</i>       | Non-destructive technologies for Cultural Heritage: the STORM approach for damage assessment                                 | 2     | Unitus |
| 25/2/19 | <i>Emilia Gugliandolo</i>     | A toolkit for supporting CH users during the prevention and intervention process   | 4     | ISA    |
|         | <i>Vanni Resta</i>            | EYCH and other future EU initiative in the field of CH   | 1     | ISA    |
| 26/2/19 | <i>Final Test</i>             |  |       |        |