

PROGRAM

Days 1-3 Intro, Basics and Lab sessions

Venue: FORTH, Alkiviades Payatakes Room, 1st Floor

DAY 1

Monday

2 July 2018 **The first response - Imaging**

09:00-09:30	Registration
09:30-10:00	Welcome to IESL-FORTH; short introduction and activities on CH, P. Pouli (IESL-FORTH)
10:00-11:00	Optics and Lasers- an introduction, D. Papazoglou (IESL-FORTH)
11:00-11:30	<i>Break for Coffee</i>
11:30-12:15	Optical Imaging- the seen and the unseen- Principles, K. Hatzigiannakis (IESL-FORTH)
12:15-13:00	Optical Imaging- the seen and the unseen –Case Studies, K. Melessanaki (IESL-FORTH)
13:00-14:00	<i>Break for Lunch</i>
14:00-15:00	Surfaces. Finishes, techniques and materials; their properties, chemistry, and changes, A. de Tagle (Consultant on Heritage Science studies, Spain)
15:00-15:30	Photoacoustic Imaging in CH diagnostics, G. Tserevelakis (IESL-FORTH)
15:30-16:00	<i>Participants' presentations. Discussion on aims and goals of the workshop</i>

DAY 2

Tuesday

3 July 2018 **The inside look- Structural diagnostics**

09:30-10:00	Imaging with THz waves, Ch. Daskalaki, A. Koulouklidis, S. Tzortzakis (IESL-FORTH)
10:00-10:30	Holographic Interferometry- the object's hidden structure- Principles & Case Studies, V. Tornari (IESL-FORTH)
10:30-11:00	Holographic Interferometry- in-situ campaigns, M. Andrianakis, V. Tornari (IESL-FORTH)
11:00-11:30	<i>Break for Coffee</i>
11:30-11:40	Laser Safety, P. Pouli (IESL-FORTH)
11:40-12:00	Laser interaction with matter, a tailored relation, P. Pouli (IESL-FORTH)

12:00-12:30	Laser assisted removal of encrustation from stone, P. Pouli (IESL-FORTH)
	Lab hands-on (parallel sessions)
	1. <i>Optical Imaging</i>
12:30-13:15	2. <i>Holographic Interferometry</i>
	3. <i>Raman-FTIR</i>
	4. <i>Laser Cleaning</i>
13:15-14:15	<i>Break for Lunch</i>
14:15-15:00	Lab hands-on (parallel sessions 1, 2, 3, 4)
15:00-15:45	Lab hands-on (parallel sessions 1, 2, 3, 4)
15:45-16:30	Lab hands-on (parallel sessions 1, 2, 3, 4)

DAY 3

Wednesday

4 July 2018 **The inside look - Materials analysis**

09:30-10:30	Material analysis- Spectroscopy, D. Anglos (IESL-FORTH)
10:30-11:00	LIBS, the elements and their stratigraphy, P. Siozos (IESL-FORTH)
11:00-11:30	<i>Break for Coffee</i>
11:30-12:00	Raman spectroscopy, the molecular signature, A. Philippidis (IESL-FORTH)
12:00-12:30	Mineral characterization and decay evaluation of the stone building and ornamental elements of the Palace of Knossos. A multi-analytical approach focusing on Raman spectroscopy, within the concept of the HERACLES project, G. Grammatikakis (UoC)
12:30-13:00	Conservation and restoration works in the Palace of Knossos: the previous interventions and the recent strategies within HERACLES, E. Kavoulaki, E. Politaki (Ephorate of Heraklion)
13:00-14:00	<i>Break for Lunch</i>
14:00-15:00	Lab demos on photoacoustic imaging
17:00-19:00	<i>Guided tour at the Minoan Palace of Knossos with discussion on the conservation challenges investigated within HERACLES</i>

Days 4-5 HERACLES (lectures and in-situ campaigns)

Venue: Venetian Fortress KOULES, Heraklion Port

DAY 4

Thursday

5 July 2018 The HERACLES project- lectures

09:30-10:00	Overview and the vision of HERACLES Project- G. Padeletti (CNR, Italy)
10:00-10:30	Climate Change impact evaluation and risk and vulnerability analysis- G. Alexandrakis (IACM-FORTH, Greece)
10:30-11:00	Development of an in-situ diagnostic protocol for quick assessment and monitoring of the weathering state and its progress on the HERACLES test beds – I. Catapano (CNR, Italy)
11:00-11:30	Towards an effective fusion of remote sensing and in-situ monitoring data for structural assessment of heritage buildings: first experiences in Gubbio and Heraklion- M. Costantini (e-Geos, Italy)
11:00-11:30	<i>Break for Coffee</i>
11:30-12:00	Development of a detailed analytical protocol for laboratory analysis for the determination of materials and their alteration for the HERACLES test beds using high resolution sophisticated state-of-the-art analysis and microscopy- A. Curulli (CNR, Italy)
12:00- 13:00	Using laboratory analytical techniques to understand materials and degradation mechanisms on monuments; The HERACLES case studies – J. Veiga (UniNova, Portugal)
13:00-14:30	<i>Break for Lunch</i>
14:30-15:00	Materials for restoration of ancient masonry- G. Montesperelli (CVR, Italy)
15:00-15:30	Synthesis, application and evaluation of new consolidating materials for the protection of Knossos selenite structural elements – K. Demadis (UoC, Greece)
15:30-16:00	Introduction and Demonstration of the HERACLES ICT platform- T. Hellmund (IOSB Fraunhofer, Germany)

DAY 5

Friday

6 July 2018 The HERACLES project- in-situ campaign at Koules

09:30-10:00	The Venetian Sea Fortress (Rocca a Mare or Koules). Building and restoration history, V. Sythiakakis, E. Georgali, K. Patedakis (Ephorate of Heraklion)				
10:00-10:30	The conservation strategies on the Venetian Fortress of Koules within HERACLES, A. Psaroudaki (Ephorate of Heraklion)				
	On-site Demos (parallel sessions)				
	<i>A. In-situ analysis of deterioration products using portable laser spectroscopic instruments) - LIBS (IESL-FORTH)</i>				
10:30-11:30	<i>B. In-situ analysis of deterioration products using portable laser spectroscopic instruments - Raman (IESL-FORTH)</i>				
	<i>C. Under-water acoustic surveying using swallow Side Scan Sonar (IACM-FORTH)</i>				
	<i>D. Ground Penetrating Radar, GPR (CNR)</i>				
11:30-12:30	On-site Demos (parallel sessions A, B, C and D)				
12:30-14:00	<i>Break for Lunch</i>				
14:00- 15:00	On-site Demos (parallel sessions A, B, C and D)				
15:00-16:00	On-site Demos (parallel sessions A, B, C and D)				
	Wrap up discussion, evaluation and recap on the workshop, remarks, future directions and priorities				
Key:	HERACLES lectures	HERACLES demos	Lectures	Lab sessions	Discussions and site-visits