

Preliminary Program

Day 1 – 3 Jun 16

Topic: Hazard & Risk Assessment

9:00 – 9:15	<i>Opening and Welcome</i>	Ahmet Yalciner (METU)
9:15 – 10:00	<i>Assessing flood risk through a holistic framework, the PEARL approach</i>	Zoran Vojinovic (UNESCO – IHE)
10:00 – 10:45	<i>Connecting flood risk science and research to policy and practice: IWA's role</i>	Pritha Hariram (IWA)
10:45 – 11:00	Break	
11:00 – 12:30	<i>Hazards, Processes, Frequencies and Magnitude: Tsunamis and tsunami hazard assessment</i>	Costas Synolakis (TUC)
12:30 – 13:30	Lunch	
13:30 – 14:00	<i>Flood risk assessment in urban environment due to multiple stressors and different scenarios, tools enhancing/assisting decision support procedures</i>	Christos Makropoulos (NTUA)
14:00 – 14:30	<i>Understating coastal stressors resulting in wave overtopping discharge and wave run-up starting from offshore waves processes until shallower water regions</i>	Vicky Tsoukala (NTUA)
14:30 – 15:00	Break	
15:00 – 15:45	<i>Recent tsunami events in Chile 2010, 2014 and 2015, what we have learnt from these events?</i>	Bernardo Aliaga (UNESCO – IOC)
15:45 – 17:15	<i>GIS Products for Coastal Management & with An introduction to “Image processing for coastal management”</i>	Lemonia Ragia (TUC) (with Konstantia Moirogiorgou & Vasillis Paravolidakis)
17:15 – 17:30	Break	
17:30 – 18:00	<i>Workshop: Introduction, description of case studies and perspectives, identification of the working groups. 3 minutes stand-up presentations of each student about their studies regarding the topics of the summer school.</i>	Ahmet Yalciner & Nilay Dogulu (METU)
20:00	Dinner - Social Event	

Day 2 – 4 Jun 16

Topic: Modelling

9:00 – 10:30	<i>Tsunami Modelling and Data Products: Relative importance of non-linearity in the propagation, and presentation of different relevant mathematical models & An overview of models for Tsunami simulations, with attention to the numerical treatment of depth averaged equations</i>	Michel Benoit (IRPHE) & Mario Ricchiuto (INRIA)
10:30 – 11:00	Break	
11:00 – 12:30	<i>Models and tools for flood risk modelling and management</i>	Zoran Vojinovic (UNESCO – IHE)
12:30 – 13:30	Lunch	
13:30 – 14:15	<i>Tsunami warning and novative modeling forecasting methodologies</i>	Audrey Gailler (CEA/DAM) & Francoise Schindel� (CEA/DAM)
14:15 – 15:00	<i>Introduction to coastal morphological changes induced by tsunamis. The coastal uplift of the 365 tsunami in Crete</i>	Gerassimos Papadopoulos (NOA)
15:00 – 15:30	Break	
15:30 – 17:30	<i>Workshop: Internal discussions of individual working groups with experts</i>	

Day 3 – 5 Jun 16

Topic: Coastal Management and Resilience

9:00 – 9:45	<p><i>Structural Resilience in Coastal Hazards</i></p> <ol style="list-style-type: none"> 1. Introduction 2. Types, stability and functionality of Coastal Defence Structures 3. Examples of Marine Hazards in terms of their impacts on coastal structures 4. Examples of Structural solutions and their performance against different marine hazards 5. Recent trends for resilient coastal structures 	Ahmet Yalciner (METU)
9:45 – 10:30	<p><i>Social Resilience on Hazards</i></p> <ol style="list-style-type: none"> 1. Introduction to community resilience 2. Risk perception and preparedness models 3. Resources and capacities for social resilience 4. Examples of community resilience building implementations 	Nuray Karanci (METU) & Canay Doğulu (METU)
10:30 – 11:00	Break	
11:00 – 12:30	<p><i>Decision making processes and spatial/urban planning affecting cities' vulnerability, communities risk perception and preparedness against flood risk</i></p>	Jörn Birkman (UNU – EHS)
12:30 – 13:30	Lunch	
13:30 – 15:30	<p><i>Workshop: Tsunami forecasting; Community Modeling Interface for Tsunamis (ComMIT)</i></p>	Utku Kânoğlu
15:30 – 16:00	Break	
16:00 – 17:30	<p><i>Workshop: Internal discussions and preparation of presentations & Working group presentations and Outcome Synthesis of the Workshop discussions and results</i></p>	Ahmet Yalciner & Nilay Dogulu (METU)
17:30 – 18:00	<p><i>Discussion session: Feedback from participants and evaluation of the summer school activities</i></p>	
18:00	Closing	

Day 4 – 6 Jun 16

Full day | Christos Makropoulos (NTUA)

Field Trip to case study site **Rethymno**:

Walk along the coast from Marina to Port Facilities (through the Old Venetian Harbour) of the city of Rethymno during which:

- several outlets of rivers/drains/canals that cross the city and are important vectors of floods will be seen (interaction of coastal and inland pressures)
- we will see and discuss issues of sediment transport
- the problem of wave overtopping in the harbor will be described and damages will be seen
- reference to future protection measures and structures (submerged breakwaters, etc.) that are under planning and construction will be made and visualised

Then we will move towards the Old City and especially Loggia which is where water accumulates during precipitation events. Walk through Arkadiou Street, and discuss the Kamaraki steam and the damages which have occurred there.

Visit to the flood control dams, Platanias river or the Dam of Potamon (to be confirmed).

We plan to test and present the App FIND (Finding Inaccessible people in Natural Disasters) ASTARTE's project ubiquitous framework for natural disasters by Luis Carriço (ASTARTE) in cooperation with local authorities (Civil Protection).

Also, we plan to visit the water management or civil protection authorities or actors to discuss with the students plans and actions during a flood event.

A "background info pack" will be provided.

Day 5 – 7 Jun 16

Full day	Gerassimo Papadopoulos (NOA)	
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Field trip in the coastal archaeological site of **Phalasarna, NW Crete**:

Phalasarna was a Roman-Hellenistic harbor which today is situated about 100-200 m inland. A large part of the harbor has been revealed thanks to the excavation works directed by the dedicated archaeologist Dr Elpida Hatzidaki in the last 25 years or so. The great geoscientific interest is that it has been supported that the NW part of Crete was uplifted by about 6.5 m with the big (estimated magnitude 8.5) earthquake of 21 July 365 AD. Due to this impressive uplift the Phalasarna harbor is today situated inland. It is historically documented that this earthquake caused an equally large tsunami that flooded eastern Mediterranean coastal sites causing a high death toll and destruction in Alexandria and elsewhere. Tsunami sediment deposits were found and described in publications since 1992. Other co-seismic movements which are evident in the area may explain sea level changes in the harbor during historical times. A likely event that affected the area was the large tsunamigenic earthquake of ca. 66 AD.

In this full-day field trip we will visit the famous archaeological site of Phalasarna, about 60 km to the west of Chania. From the bus stop we will walk for about 10 min. to reach the archaeological area. Lunch can be taken in the nearby tavernas while swimming is a possibility in the afternoon.

An introductory lecture will be given on day 2 – 4 Jun 16, to provide necessary background information.