



IMEKO TC-19 INTERNATIONAL WORKSHOP ON Metrology for the Sea

NAPLES, ITALY 5-7 OCTOBER 2020



CALL FOR PAPERS FOR THE SPECIAL SESSION ON:

MEASUREMENTS FOR PAST AND PRESENT SEA LEVEL CHANGES

ABSTRACT

Coastal areas are known to be among the most dynamic elements of the physical landscape, strongly influenced by short to long term forcing factors. In the short term, seasonal and catastrophic meteor-marine events and human impacts can directly interfere with the equilibrium of these areas, sometimes producing drastic coastal changes and sea level oscillations. In a longer timescale, GIA, tectonics, volcano activity and climate changes, certainly are the main factors influencing global and local millennial sea-level variations.

In this perspective, it is crucial to understand the impact of relative sea level changes on coastal landscape at different geographic scales, to correctly manage the coastal areas and to prepare the coastal communities to face the expected changes driven by global warming.

In the last years, the integration between direct measurement and geo-acoustic and/or remote sensing methods allowed acquiring large amounts of four-dimensional -3D points and time - high -precision data directly related to relative sea-levels variations and/or to rapid changes in coastal morphology, mainly due to extreme events.

A multi-proxies approach based on sea-level geo-indicators and/or sensors-based measurements are challenges of great scientific interest, intended to populate specific databases at Mediterranean and global scale, useful to understand and reduce the uncertainty on sea-level changes models and future coastal scenarios.

This session welcomes studies from individuals or groups that use multidisciplinary or innovative approaches to measure relative sea levels and coastal changes from the past millennia to present time, to reconstruct geomorphological processes, human impact and system response, as well as issues of landscape resilience and human adaptation. Approaches involving the use of multi-scalar datasets are strongly encouraged.

TOPICS

Topics of this special session will include:

- Multi-proxies measurements and past sea-level changes
- Techniques and approaches for sea level analysis
- Extreme marine events: tsunamis and storm surges
- Relative sea level projections and modelling future coastal scenarios
- Sea level changes and human adaptations

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