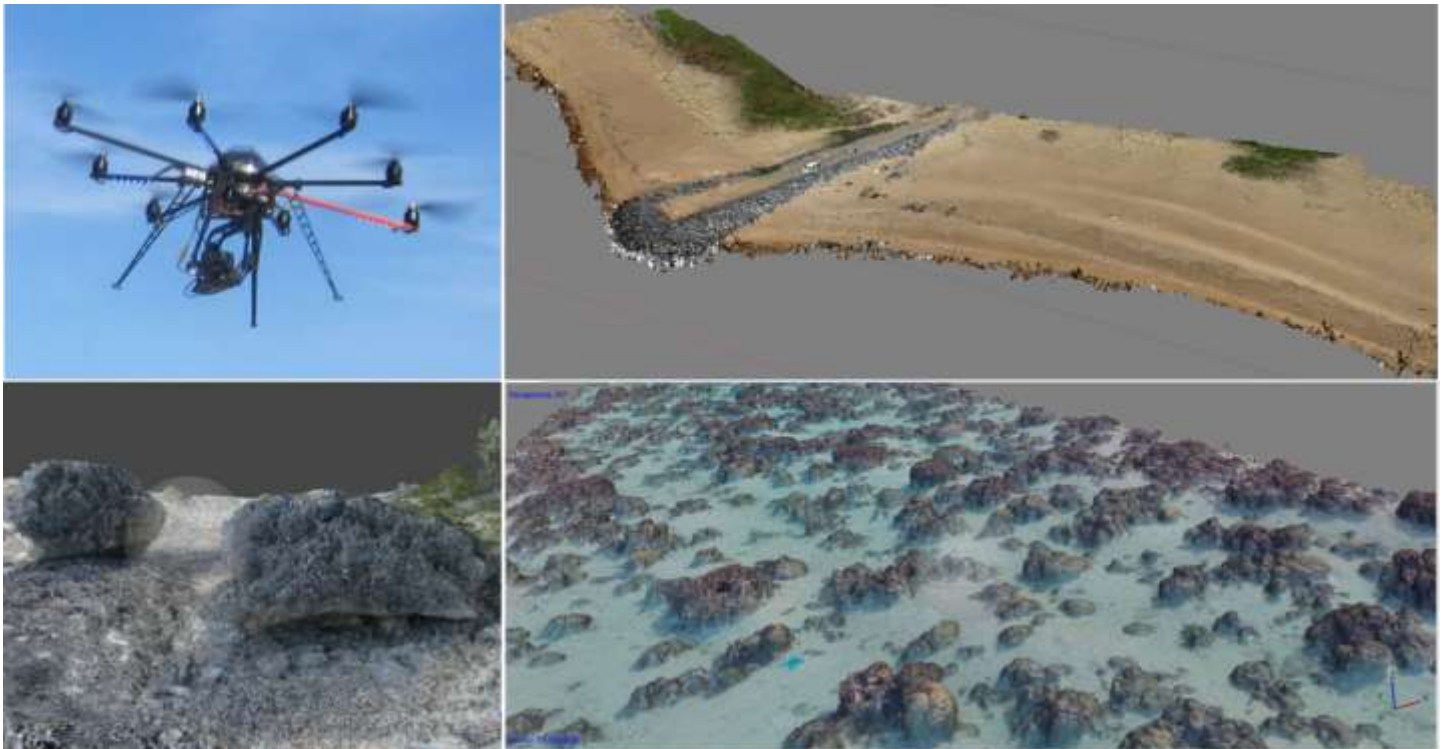

**Scientific survey using Unmanned Aircraft Systems,
3D reconstruction of coastal environments with the SfM-MVS approach
using Metashape and regulatory framework (new EU regulation)**

Dr.-Ing. Elisa Casella



February 17th and 18th, 2021

Virtual Workshop

Leibniz-Zentrum für Marine Tropenforschung (ZMT) GmbH

WED 17th

13:00-13:40	Introduction: The drone sector, Drones and GNSS, Workflow of the methodology
13:40-14:10	Discussion with participants on drones scientific interests
14:20-17:00	Planning a survey using a UAS: Regulatory framework, Flight planning, Ground Control Points, Flight programming (breaks are planned)

THUR 18th

13:00-13:30	Scientific applications
13:30-14:15	Structure from Motion-Multi View Stereo workflow
14:15-17:00	Hand-on experience with Agisoft Metashape software (breaks are planned)

The UAS market is flourishing and the use of UAS is revolutionizing many fields, among which environmental studies and all the sciences where a small-scale aerial view can provide high-resolution information to study natural or human-induced processes. Together with UAS, the development of new-generation photogrammetric methods are building the base of a more efficient way to measure environmental changes.

The aim of this workshop is to provide an introductory course to coastal scientists willing to explore the potential of UAS in their studies and using them consciously. This workshop has also the aim of introducing the photogrammetric method through the Agisoft Metashape suite. Participants will be able to reconstruct the 3D environment of a scene and measure 3D properties of objects in a given reference system using photos.

Who can attend? Scientists, Post Docs, PhD students, Master Students.

Maximum number of participants: 6

Requirements: Laptop, internet connection, installing a trial version of Agisoft Metashape (details will be provided in due time)