

Dear Colleagues,

Geomatic is a new neo-logism based an disciplinary scientific contents concern the acquisition, restitution, analysis and management of data of a metric or thematic nature relating to the Earth's surface, or portions of it, including the urban environment, infrastructures and architectural heritage, identified by their spatial position and qualified by the accuracy of the survey. The disciplines covered with Geomatic are geodesy (physical, geometric and spatial), topography, photogrammetry (aerial and terrestrial), cartography, remote sensing (spatial, aerial and terrestrial), navigation (spatial, aerial, maritime and terrestrial) and spatial information systems. The fields of application are, in particular, the study of global and local reference systems, instruments and methods for surveying, controlling, monitoring the territory, structures and cultural heritage, processing of measurement data, production and updating of cartography, topographic DBs, tracking of works and infrastructures, mobile surveying systems, numerical models of terrain and surfaces, management and sharing of multidimensional and multi-temporal geographical information.

The aim of this Special Issue is to provide an innovative and original view of the *Geomatics Application for Geography (GAG)* in several application areas, but with an emphasis on the interdisciplinarity of the term geomatic.

Geographia Technica is a journal devoted to the publication of all papers on all aspects of the use of technical and quantitative methods in geographical research. It aims at presenting its readers with the latest developments in G.I.S technology, mathematical methods applicable to any field of geography, territorial micro-scalar and laboratory experiments, and the latest developments induced by the measurement techniques to the geographical research <http://technicalgeography.org/index.php/aims-and-scope>. Geographia Technica is dedicated to all those who understand that nowadays every field of geography can only be described by specific numerical values, variables both of time and space which require the sort of numerical analysis only possible with the aid of technical and quantitative methods offered by powerful computers and dedicated software.

Our understanding of Geographia Technica expands the concept of technical methods applied to geography to its broadest sense and for that, papers of different interests such as: G.I.S, Spatial Analysis, Remote Sensing, Cartography or Geostatistics as well as papers which, by promoting the above mentioned directions bring a technical approach in the fields of hydrology, climatology, geomorphology, human geography territorial planning are more than welcomed provided they are of sufficient wide interest and relevance.

Geographia Technica is Indexed by CLARIVATE ANALYTICS, SCOPUS, GEOBASE, EBSCO, SJR, CABELL, Web of Sciences and is SCIMAGO Ranking Q2 <https://www.scimagojr.com/journalsearch.php?q=19200156806&tip=sid&clean=0>

For submitting an article please consider the following link:

<http://technicalgeography.org/index.php/submit-a-manuscript>

In this Special Issue (GAG) we invite papers concerning:

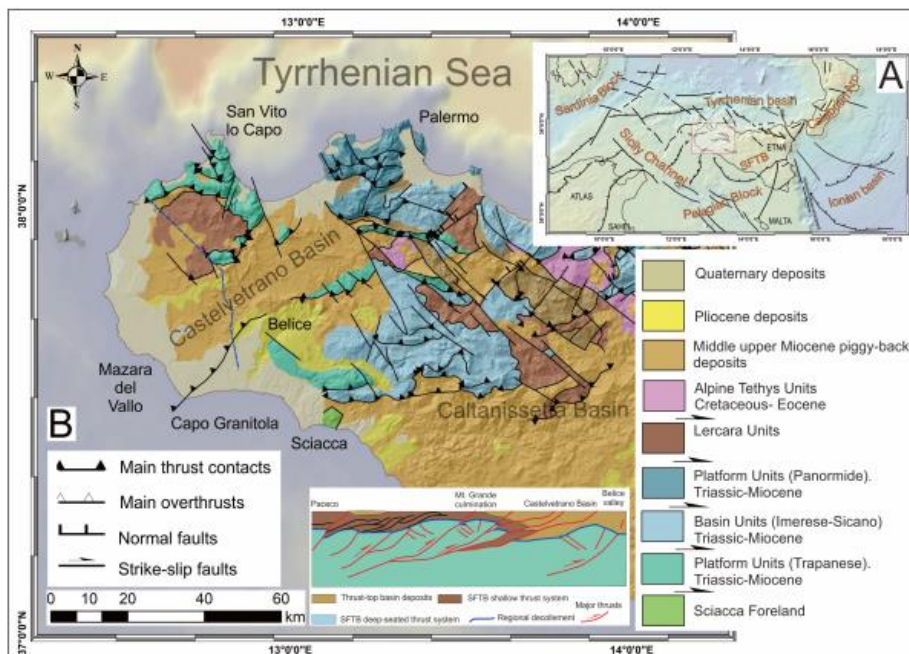
## Keywords

- Geographic Information Systems (GIS) and WEBGIS
- Geomatics
- Remote sensing and Data Collection
- Mapping and Monitoring
- Spatial Data Analysis
- Geospatial Modelling
- 3D Visualization
- Geohazards
- Environment
- GNSS application (GPS, Glonass, Galileo, Beidou)
- Laser scanner application
- Photogrammetry application
- Cultural Heritage application

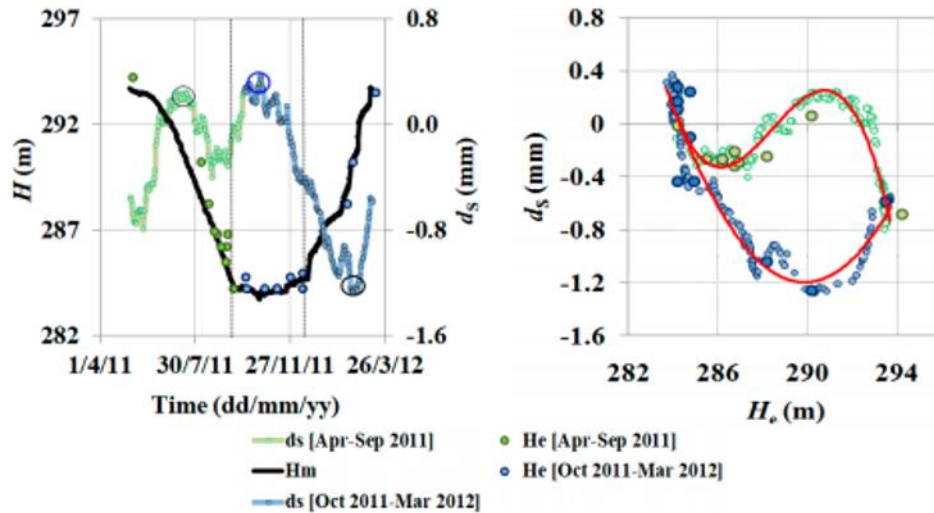
Deadline for submitting manuscripts Mai 31, 2021.

## Guest Editors

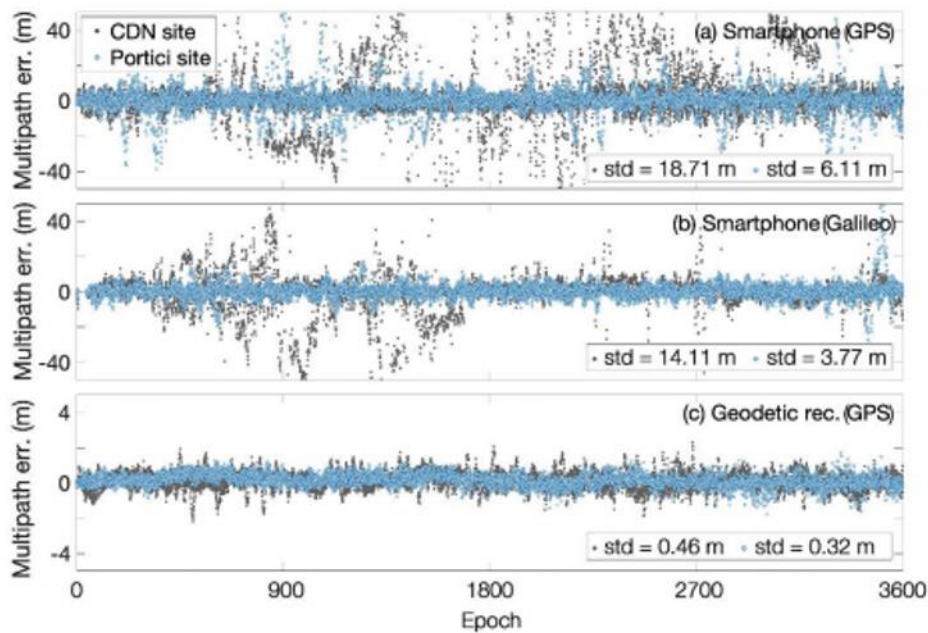
Prof. Valerio Baiocchi, Ph.D. Sapienza University of Rome (Italy)  
 Dr. Gino Dardanelli, Ph.D. University of Palermo (Italy)



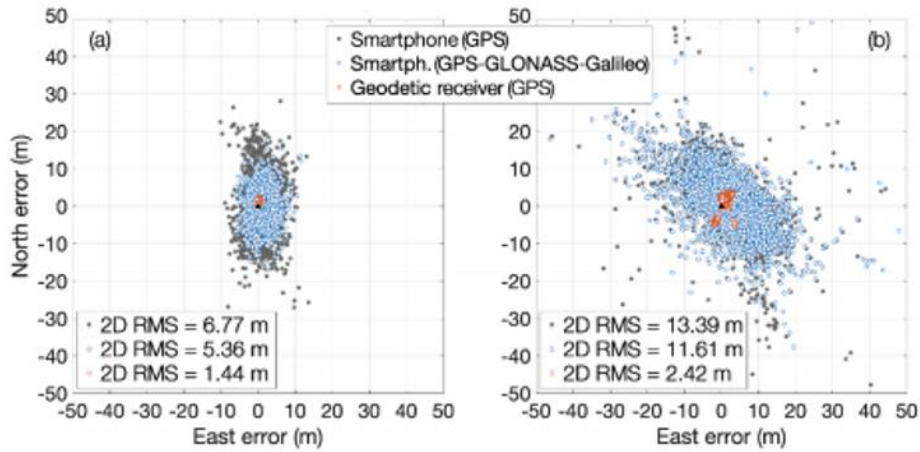
**Figure 1.** a) Tectonic model of the Central Mediterranean region where SFTB occur. Lines represent the main faults. Lines with triangles represent the main contractional tectonic features. (b) Geological sketch map of central-western Sicily (from Finetti et al., 2005, modified) showing the main tectonic units and contacts, the latter consisting mostly of thrust and strike-slip faults.



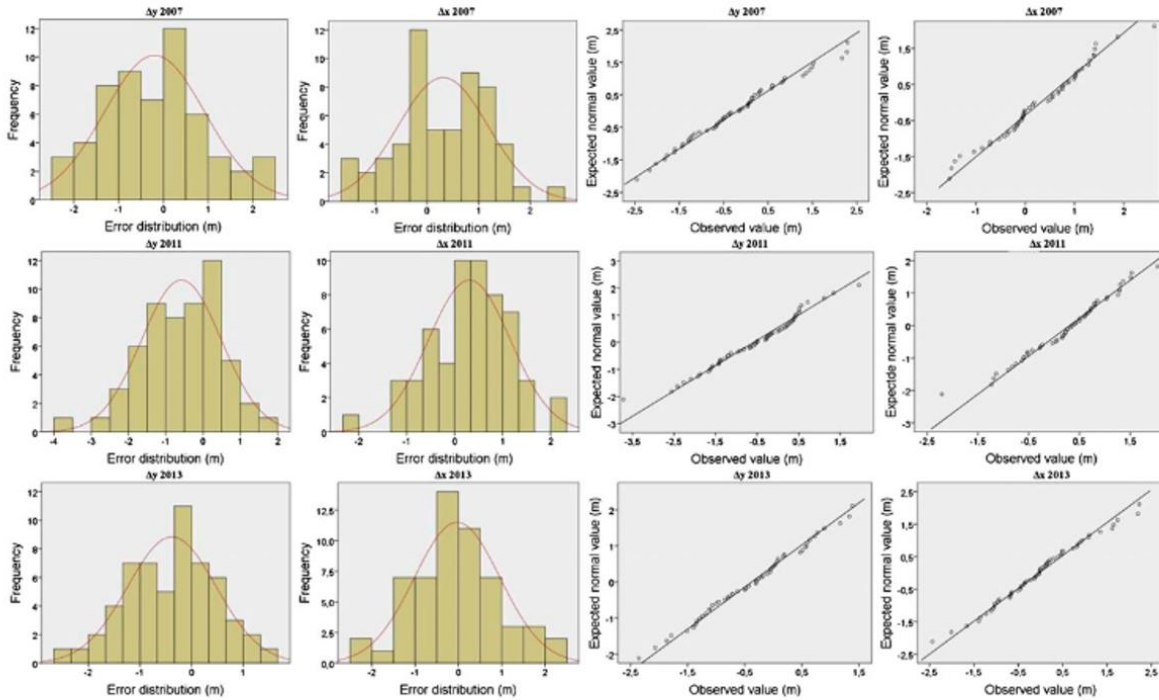
**Figure 14.** On the left panel: Time behavior of the water level from measurements in situ ( $H_m$ , black line) and visual matching ( $H_e$ , big circles) during the emptying phase until the minimum (in green) and filling phase (in blue) from the minimum (primary y-axis,) and GNSS time averaged displacements ( $d_s$ ) (green and blue lines, secondary y-axis). On the right panel,  $H_e$ , and  $H_m$ , vs.  $d_s$ , during the emptying (green circles) and filling (blue circles) phase, over-imposed two interpolation curves (red continuous lines).



**Figure 5.** L1/E1 code multipath error for CDN site (represented in grey) and Portici site (represented in blue) versus processed time expressed in epochs. (a) L1 code multipath for all GPS satellites tracked by smartphone; (b) E1 code multipath error for all Galileo satellites tracked by smartphone; (c) L1 code multipath error for GPS satellites tracked by geodetic receiver.



**Figure 6.** Scatter plot of L1/E1 single-point position error. Grey markers represent errors when the solution has been obtained by using GPS only measurements collected by smartphone, blue circles represent error for smartphone multi-constellation approach, red circles represent error obtained by using geodetic receiver: (a) Portici site; (b) CDN site.



**Figure 5.** PF CP error frequencies and normal Q-Q plot for the distributions  $\Delta x$  and  $\Delta y$ . Superimposed curve in the histogram represents the normal distribution.

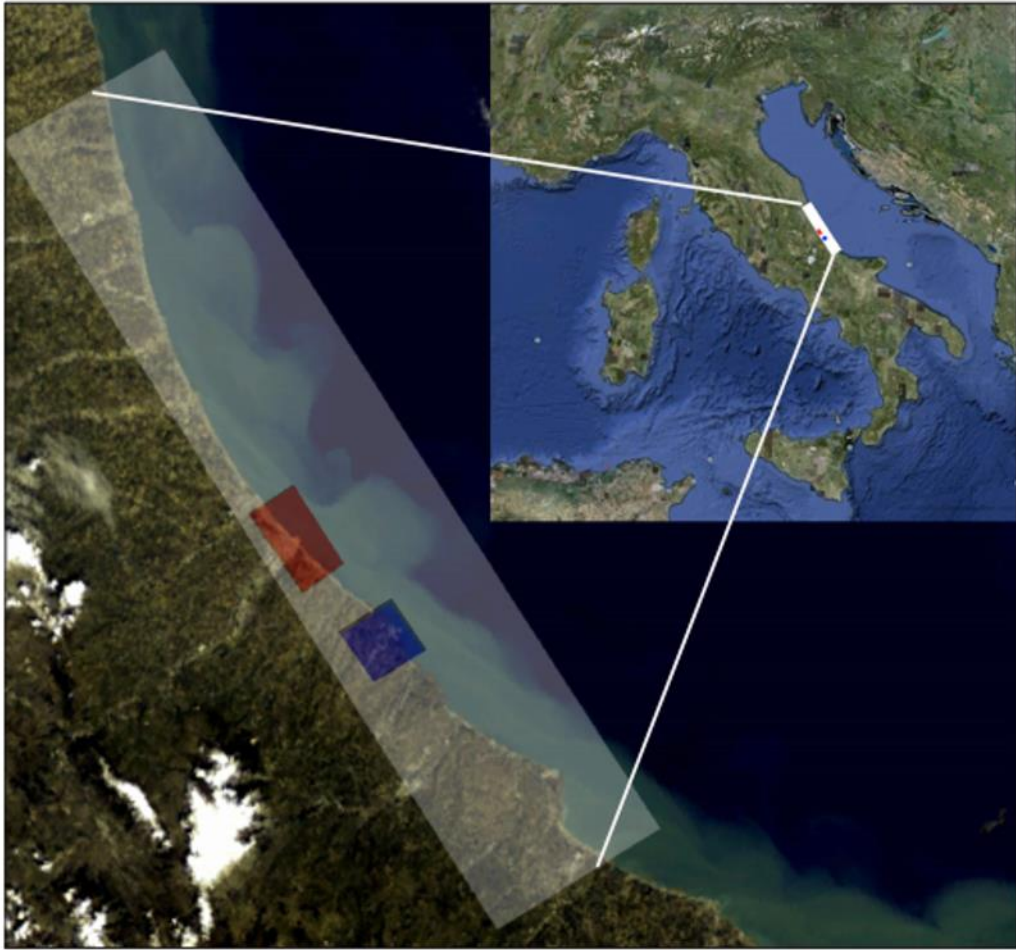


Figure 1 - Top right: broad location of the study-areas © Google Earth optical image, bottom left detailed location over-imposed to an ENVISAT MERIS image (white: coast of Abruzzo test-site, red: Pescara test site, blue: Ortona test site).