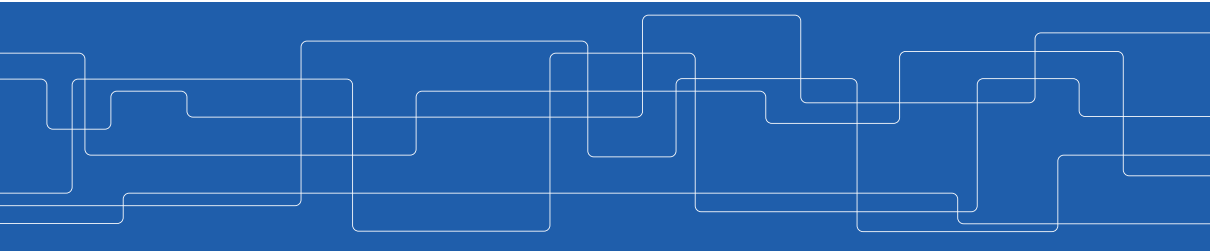
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An extended GeoNode-Based Platform for Detailed Analysis of the Spatial/Temporal DInSAR Information Contents

Adele Fusco , Sabatino Buonanno , Giovanni Zeni
Michele Manunta , Maria Marsella , Paola Carrara , and Riccardo Lanari

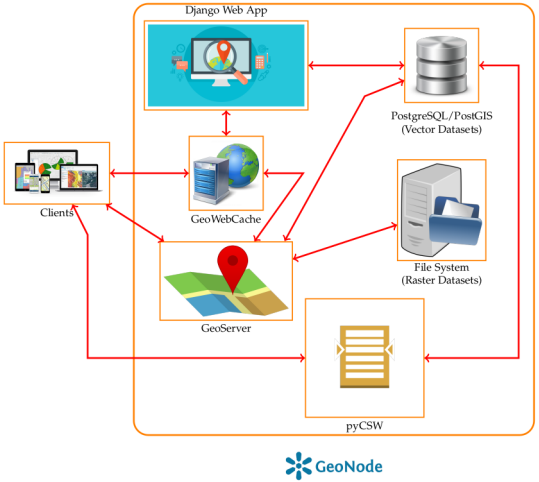


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GeoNode-based platform for DInSAR data analysis

Geospatial products, solutions and services compliant with the OGC standards

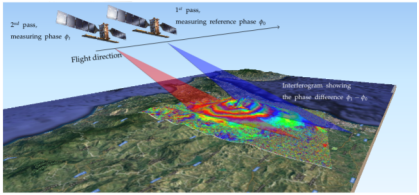
OGC®
Making location count.



Main Features of the Extended GeoNode-based Platform

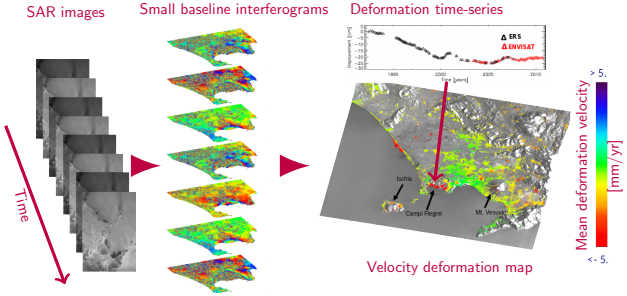
- managing
- analysing
- visualizing
- integrating with other data sources

DInSAR data for the analysis of surface deformation phenomena.



Motivation: Big Data Scenario

Large number of SAR data are processed to produce velocity deformation maps

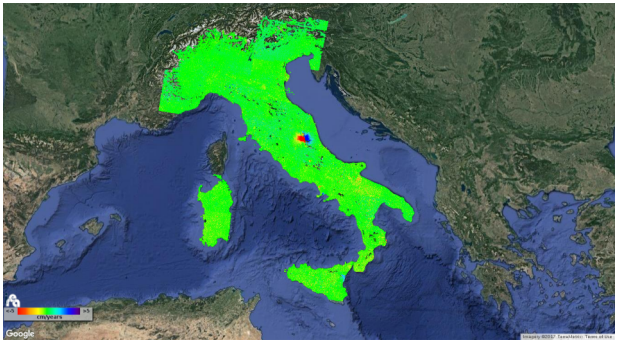


Implementation of the new GeoNode functionalities

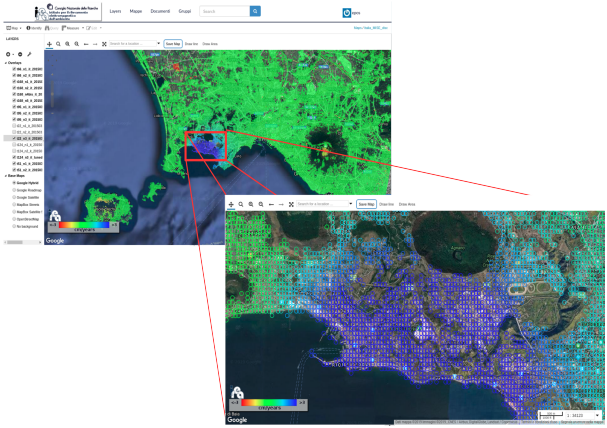
- Upload/Update of the DInSAR Measurements in a PostgreSQL/PostGIS Geo-database
- Visualization and Analysis:
  - Mean Velocity Maps
  - Mean Velocity Maps Cross-Section
  - DInSAR Deformation Time-Series
- Generation of a personalized color table (palette)
- Download of data belonging to a selected area
- Export Images


RESULTS

Sentinel-1 DInSAR mean deformation velocity map on extended GeoNode-based Platform



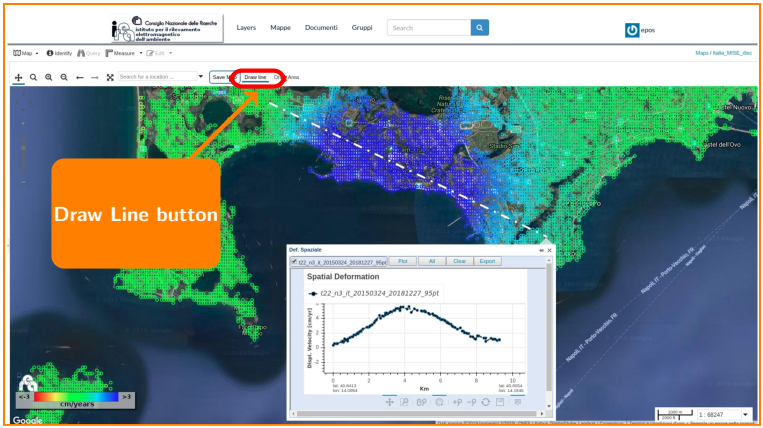
Zoomed view of the Sentinel-1 SBAS-DInSAR mean deformation velocity map relevant to the Campi Flegrei caldera (Italy): each polygon represents an area on the ground of about 90 m $\times$ 90 m.



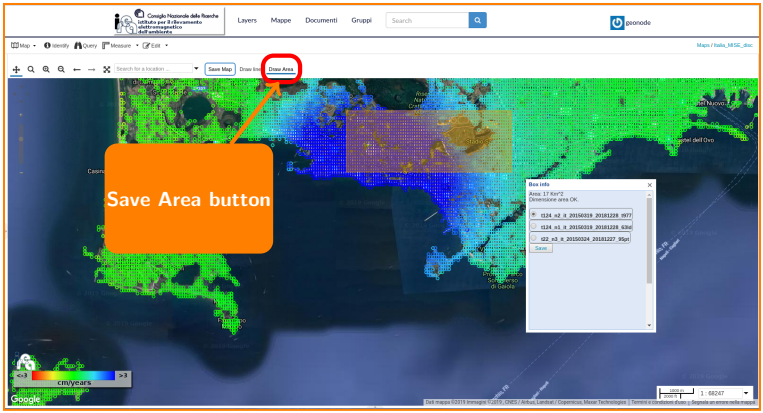
Deformation time-series plot visualization and analysis functionality



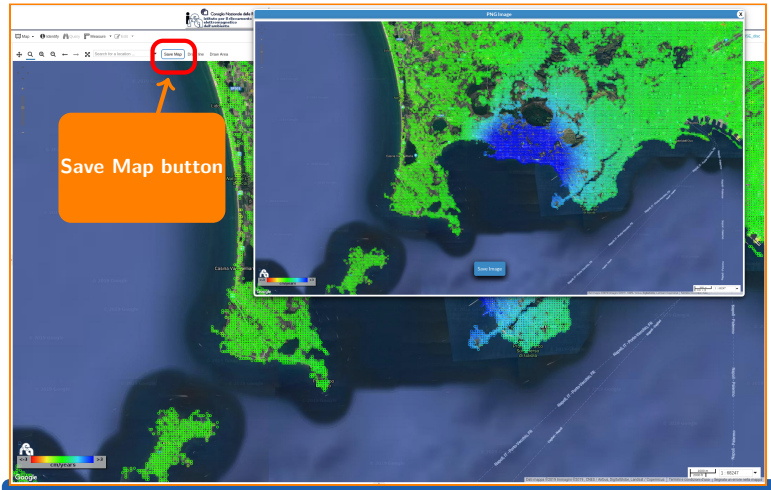
Mean deformation velocity cross-sections visualization and analysis functionality



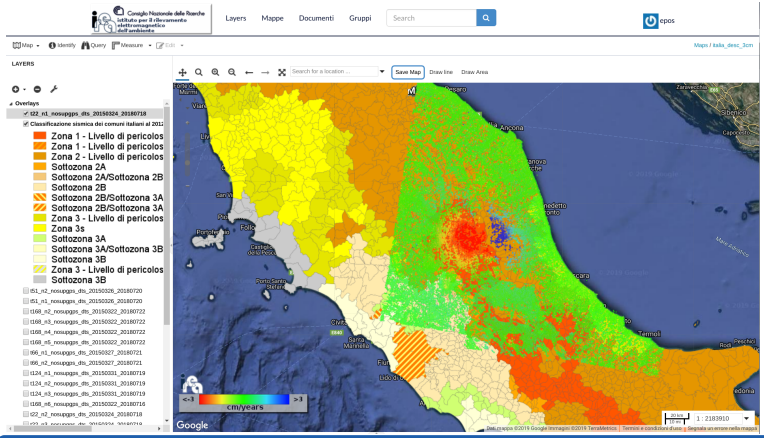
Download web plug-in on a selected area



Export image of a selected area



Joint analysis : DInSAR mean deformation velocity and the Italian municipalities seismic classification maps (2016-2017)





Open Access Article

A GeoNode-Based Platform for an Effective Exploitation of Advanced DInSAR Measurements

by Sabatino Buonanno [1], Giovanni Zeni [1], Adele Fusco [1], Michele Manunta [1], Maria Marsella [2], Paola Carrara [3] and Riccardo Lanari [1,*]

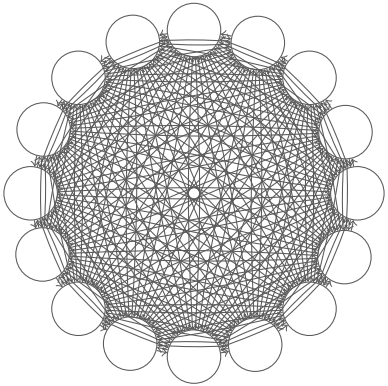
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I have not failed.
I've just found 10,000 ways that won't work

Thomas Edison

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