

EXPRESSION OF INTEREST to attend at MedRIN Network

Maria Zoran

**NATIONAL INSTITUTE OF R&D FOR OPTOELECTRONICS-
ROMANIA – Magurele Bucharest- Romania**

NATIONAL INSTITUTE OF R&D FOR OPTOELECTRONICS- ROMANIA

is a current user of NASA and COPERNICUS satellite data in synergy with field data for different environmental applications research projects:

- Natural Hazards (Earthquakes, Landslides, etc)**
- Urban Air Quality and climate**
- Urban green**
- Land use land over changes (LULCC)**
- Climate changes impacts on forest ecosystems and their feedbacks**
- Black Sea and Danube Delta Coastal zone changes**
- Flooding**
- Mining areas**
- Geological applications**
- Nuclear Power Plant Cernavoda on Danube River environmental impact analysis**
- Earthquake precursors**
- Crustal displacements**

EXPECTED RESULTS

According to MedRIN objectives, Romanian expertise can contribute at:

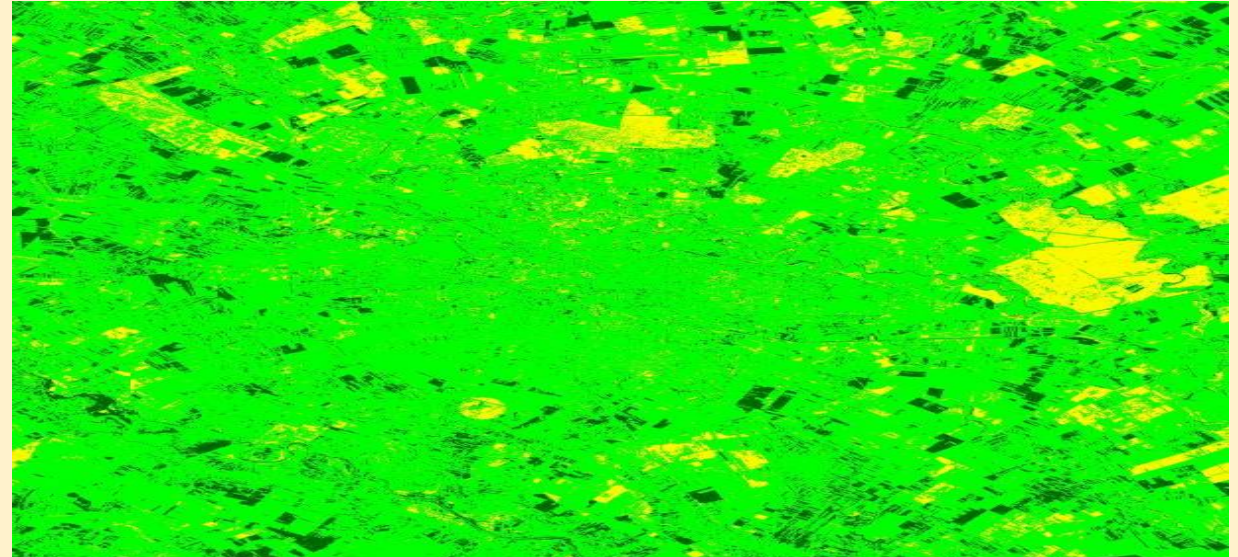
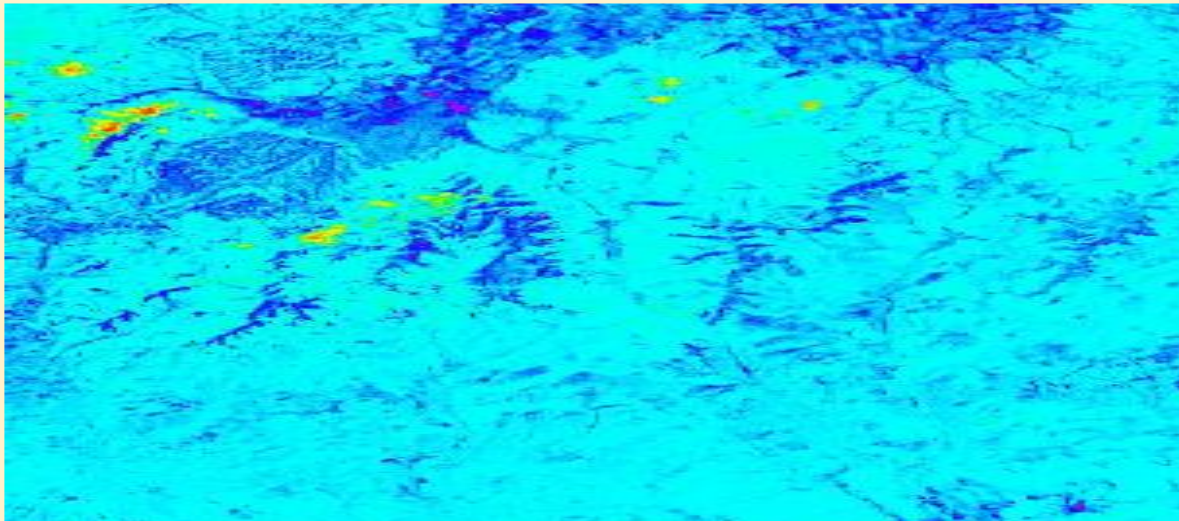
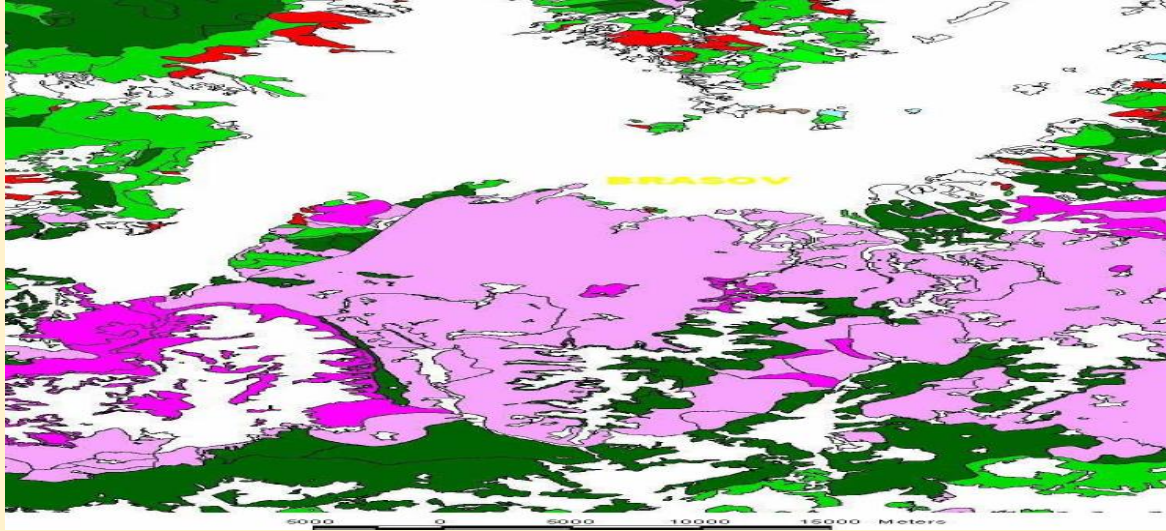
- A better coordination and linkage of Earth observation monitoring systems and databases across Mediterranean and European regions,
- Strengthening and upgrading existing European regional/national Earth Observation networks on environmental applied remote sensing. (Our institute is affiliated at AERONET and EARLINET Networks and has a METEOSAT receiving station).
- Will be achieved alignment of multi-modal and multi-source data compliant to international norms.
- A better utilization of Copernicus and NASA relevant freely distributed services in the region by end users will improve forecasting modeling and early warning systems designed.
- An increased contribution to free publicly-available data through interoperable databases and services will be provided.

USE of LANDSAT TM/ETM/OLI and MODIS Time series : Vegetation

Carpathian Mountains

Forest ecosystem changes

Urban green changes for Bucharest city



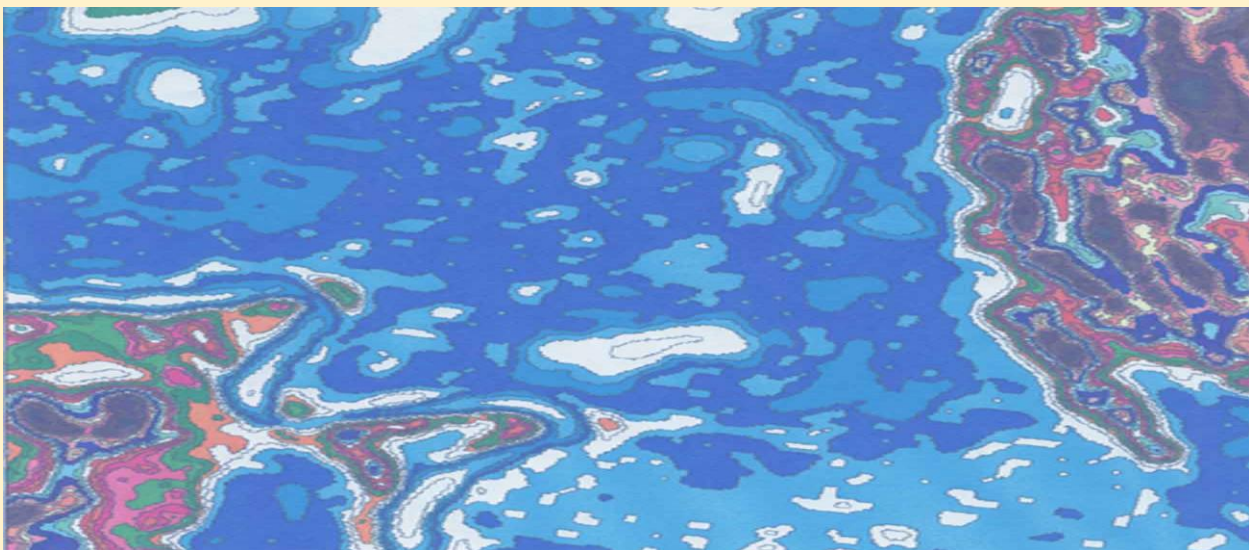
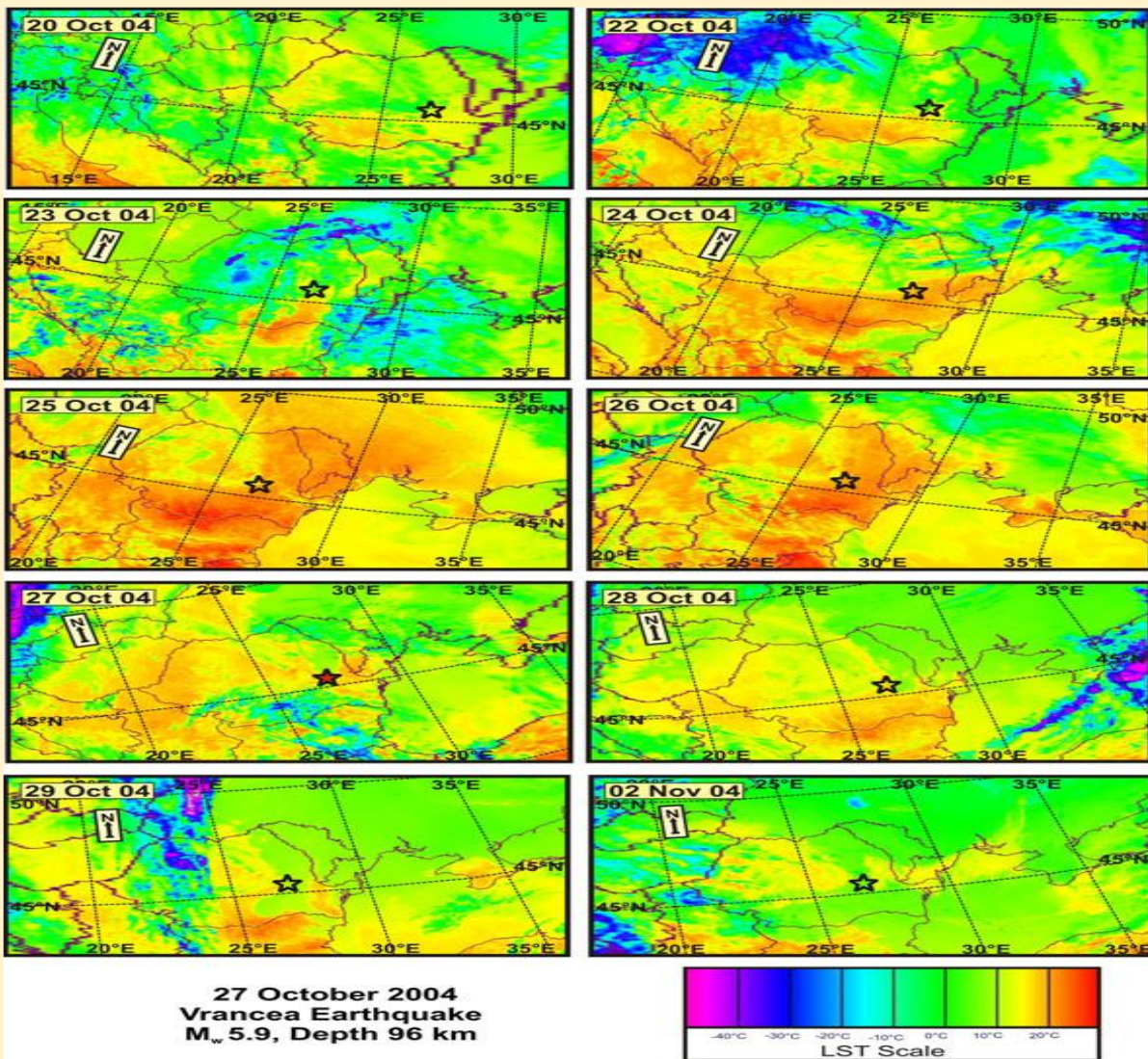
USE of LANDSAT , NOAA, MODIS Time series : Environmental Hazards

Natural- Earthquakes

TIR precursors- Vrancea active area

Anthropogenic- Thermal Plume NPP

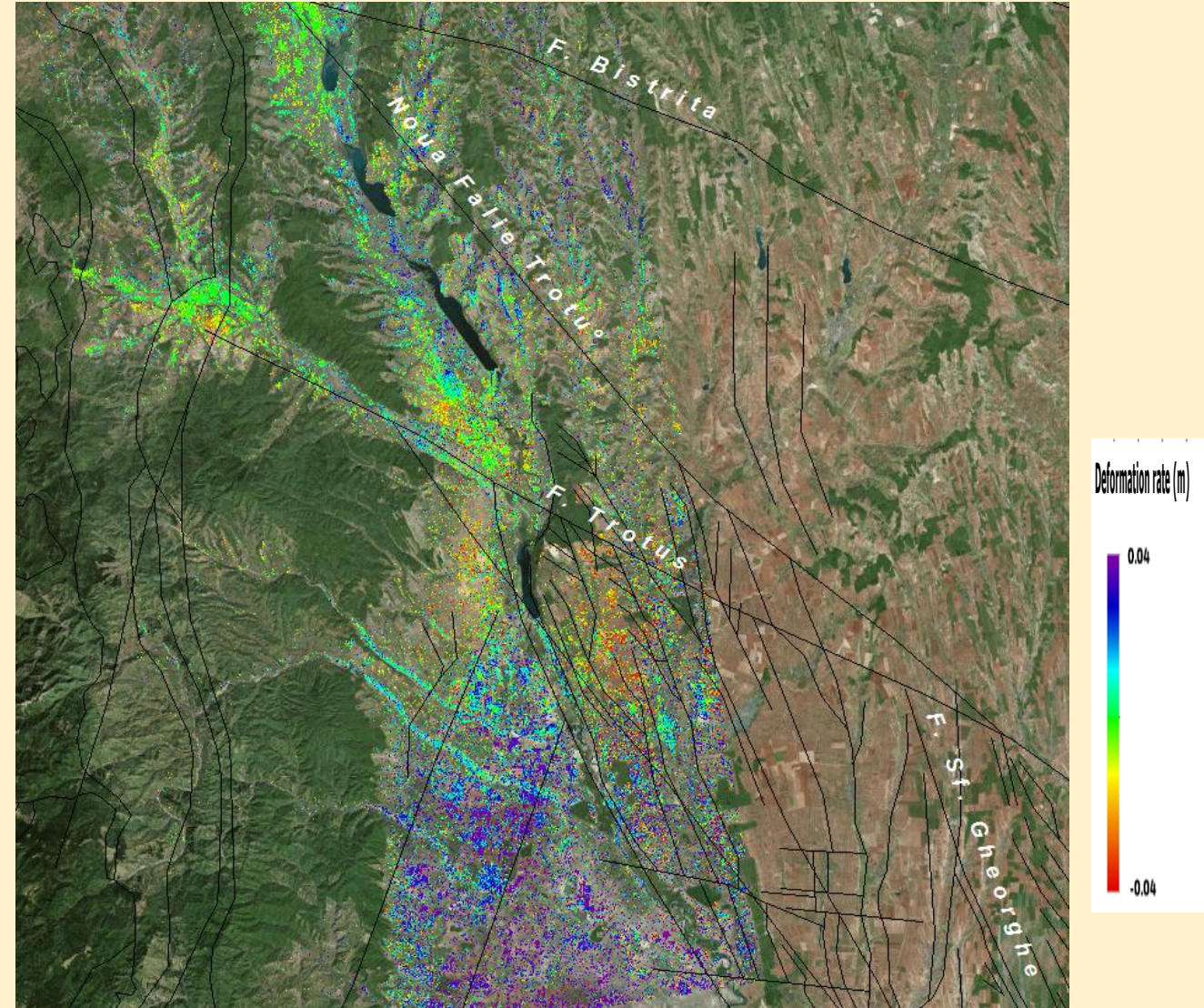
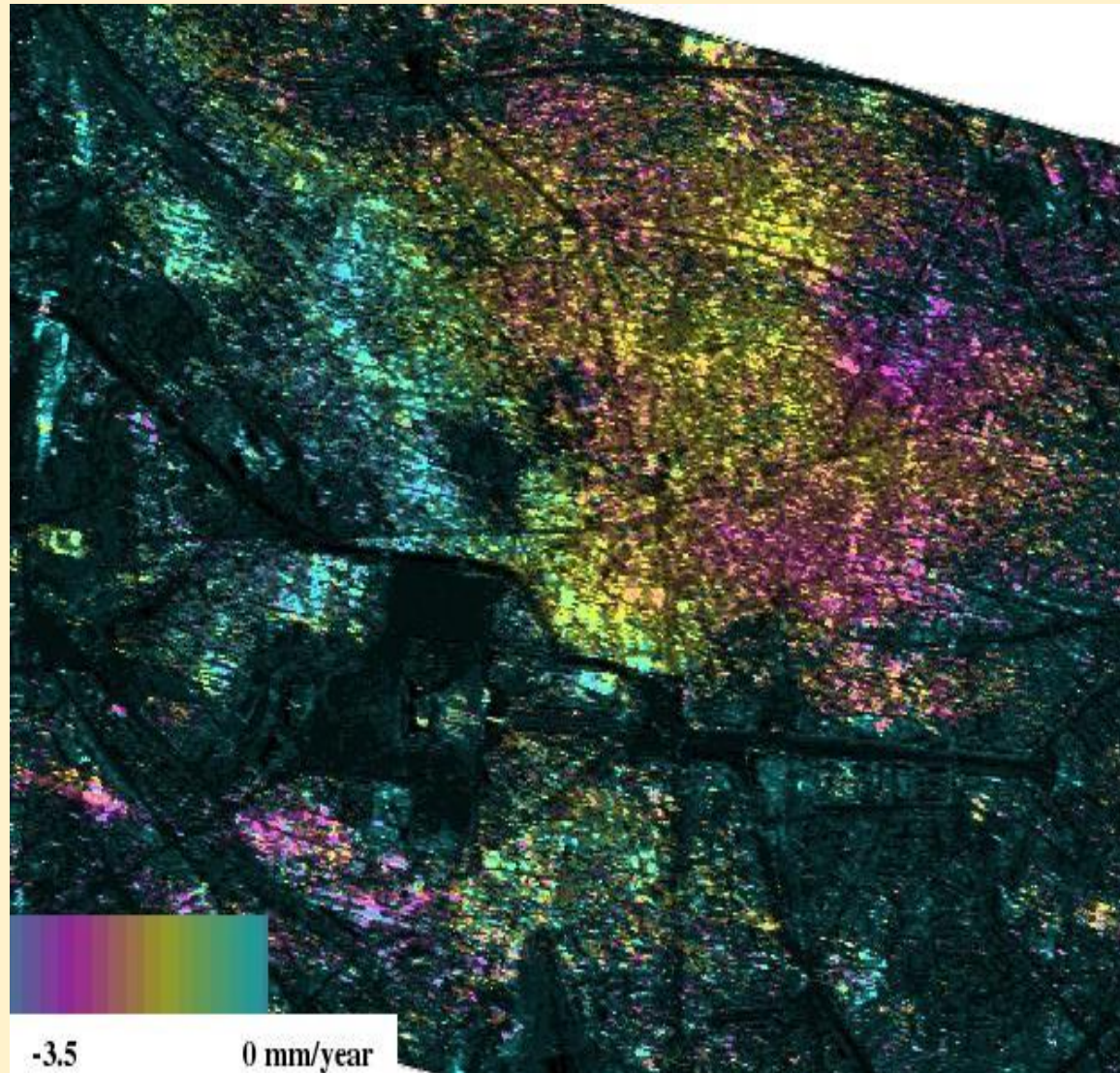
(Nuclear Power Plant)-Cernavoda



Sentinel 1- Monitoring of land surface deformation

Crustal displacements for
Bucharest metropolitan zone

Deformation map of Vrancea seismic area during
2014-2016 period due to small and moderate
earthquakes



**Thanks to RSCy2019
Organizers
for Invitation to attend at
MedRIN !**