



## ABSTRACTS

### 17. Dan VELE, Vasile NACU: *THE DETERMINATION OF POTENTIAL ENERGY ACCUMULATION IN THE TERRESTRIAL CRUST USING GEODETIC MEASUREMENTS*

*In determining the accumulation of potential energy in the terrestrial crust, it participates with specific methods, the majority of geosciences studying the Earth's crust dynamics. Among these, geodesy has its own place. Results from the geodetic determinations, compete to elucidate a multitude of problems regarding the evolution in time of the changes in the internal structure and the top of the terrestrial crust, to knowing current processes and the attempt to predict their evolution in the future. Fundamental studies provide particularly important clarifications for applied research, such as those in the field of massive construction, exploitation in mining basins, especially in terms of their behavior and stability over time, clarification of the mechanic of terrestrial crust, and even deep structures to the anti seismic protection measures required both before and after the occurrence of such a natural phenomenon, which may sometimes have a devastating character.*

*The participation of geodesy in the study of crustal movements was determined and developed simultaneously with the acceptance of the concept of global tectonics.*

*Determining a very important precursor of earthquake prediction, namely that of determining crust deformations (such as compressions, extensions), provides more and more accurately and more readily to the other geosciences, information about movements, deformations of the terrestrial crust from which it is possible to calculate, within the limits determined by assumptions of the accepted statistical nature, the amount of potential energy accumulated between the series of measurements.*

*In order to be able to answer the requirements of the other geosciences, the geodesic specialists must have good knowledge of the fields with which they collaborate (geophysics, geology, construction etc.), especially in the field of mechanics of deformable solid bodies, so from repeated geodetic measurements to be able to determine those physical quantities (displacements, deformations, intensities, potential energy), that can be used as precursors of a possible future seismic event.*

#### Organisers



#### Partners

