

## **Environmental Geochemistry and Medical Geology**

Convener: Yüksel Örgün

In order to fill the gap in the borderline area between geography and geology in treating the relationship between living and non-living nature, Soviet pedologist in the middle of the 20th Century formulated the principles of a new scientific discipline- Environmental Geochemistry. Rapid development of environmental geochemistry and its practical implementation have occurred since the outset of the 1960's. Otherwise, the term medical geology has been used since the outset of the 1990's. Medical geology, which is a multidisciplinary scientific field shared by specialists of distinct areas and scientific domains, such as earth sciences, environmental sciences, medicine, biology, chemistry, nutrition and others, is an emergent field of science that for some authors deals with the relationships between the geological environment and health problems in humans, animals and plants. Elements, minerals, rocks, soils, water and air are the essential components of the geological environment.

Aim of this session is to introduce and discuss the subjects of these new science areas. For this purpose, the following topics will be discussed in the session:

- Biogeochemistry
- Factors affecting the mobility and depositions of metals in varying environments
- Environmental issues related to active/abandoned mining areas and rehabilitation methods
- Geological perspective for defining depositional areas for solid and radioactive wastes
- New remediation technologies used for soil and groundwater pollutions
- Environmental issues related to geothermal and petroleum fields
- Pollution of agricultural soil
- Arsenic and fluoride problems in groundwater
- Heavy metal pollution in water/soil and environmental problems
- The influences of natural radioactivity on ecosystems
- Natural mineral dusts and human health
- Health problems related to deficiency and excess of major and trace elements

The past and future of medical geology in Turkey