GIS in Geology and Earth Sciences

GIS in Geology and Earth Sciences_下载链接1_

著者:Oleschko, Klaudia (EDT)/ Cherkasov, Sergei (EDT)/ Prieto, Jose Luis Palacio (EDT)/ Arguelles, Vianey Torres (EDT)/ Salado, Claudia I. Gaona (EDT)

出版者:

出版时间:2008-5

装帧:

isbn:9780735405288

Earth sciences represent the most complicated branch of science in terms of informatics. There are some specific reasons for such complexity. First of all, the scale range inside which the Earth sciences are operating goes from the atomic up to planetary scale. Secondly, there is no other branch of science, which envelops so many different disciplines, combining the field object description and sampling with strong statistical analysis, mathematical modeling and computational experiment. For instance, during a routine field work, the geologist deals with mineralogy, structural geology, tectonics, geophysics, geochemistry, environmental sciences, etc. Each one of the exemplified disciplines provides a lot of information itself, not to talk about the modeling - the most powerful computer ever existed has been designed for atmospheric modeling in the frames of Japanese 'Earth Simulator' program. The third complication is derived from the spatial/temporal snapping and variability of data and therefore of functional models, which strongly depend on the local conditions. Ideally, any bit of information in the field of Earth sciences should be attributed with geographic coordinates; otherwise it will be just impossible to properly analyze multidisciplinary data in the frames of any specific project or to create any future panorama with acceptable probability to hit upon the reality. Fortunately, revolutionary development of geographic informational systems (GIS) at the end of last century has provided us with a powerful toolbox for spatial data management. But, still, GIS is the toolbox designed for geography, being the main Earth sciences features different from the pure geographic ones, and, thus, requesting some specific applications and skills in addition to classical GIS.

作者介绍:

目录:

标签

评论

GIS in Geology and Earth Sciences_下载链接1_

书评

GIS in Geology and Earth Sciences_下载链接1_