عنوان مقاله:

Application of Fuzzy Logic Techniques in GIS for Copper Ore Deposit Identification in the Nagisan Area, East of Kerman, Iran

محل انتشار:

دومین کنفرانس بین المللی دانشجویان مهندسی معدن، زمین شناسی و متالورژی (سال: 1402)

تعداد صفحات اصل مقاله: 13

نویسندگان:

Alireza Mohammadpour – M.Sc student, Faculty of Mining Engineering, Amirkabir University of Technology, Tehran, Iran

Hossein Hassani – Associate professor, Faculty of Mining Engineering, Amirkabir University of Technology, Tehran, Iran

خلاصه مقاله:

This research aims to design an intelligent system based on fuzzy logic that can use satellite images to identify copper ore deposits and structural parameters in the Nagisan area. First, the required corrections, including the use of the log-residual method, were applied to the satellite images. Subsequently, different methods of ASTER satellite image processing such as RGB, Band ratio, LS-Fit, and Crosta were utilized to identify the alteration parts related to copper ore deposits. The results of the various methods werecompared, revealing that the Crosta method has greater efficacy in determining the propylitic, argillic, and phyllic alterations. Finally, the integration of various datasets with the Fuzzy Overlay method was used to create a final map, identifying the alterations related to copper elements in the Nagisan area, East of Kerman, Iran.

کلمات کلیدی:

Fuzzy logic, Copper, Aster, Crosta, Integrating

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1943098