Abstract

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Automatic building extraction by Margon model

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Abstract

In recent years, rural spatial information has become one of the most important tools in applications such as creating and updating the existing databases, and so on. The building is one of the most important features in rural areas. Extracting buildings from the images consists of two general sections: Building detection, which means determining the location of each building within the data set used, and building reconstruction, which means to reconstruct the two-dimensional or three-dimensional geometric model of each building. it is necessary to implement and develop new and effective methods for image processing (active curve models) in order to extract important features such as a building. In the present study, the image of the worldview-2 satellite was used to extract the boundary of the building from the image of Shahru in Hormozgan province. After preprocessing the image and applying the maximum likelihood classification method, the Margon model was implemented in the MATLAB programming environment to identify the primary areas of the building. To evaluate the results, the output of the proposed method was compared with the map, which was generated in the ArcGIS environment manually. The results indicate a total accuracy of 90%.

Biography

Mehran Dizbadi has done Master of Civil Engineering from Islamic Azad university of Shahrud.