

Abstract

Khaled Mahar

linear correlation analysis for computerized identification of categories in landsat images

a major source of quantitative data, which contains information that can be used in the classification of land covers, is the landsat series of low orbiting spacecrafts, which began in 1972 with landsat-1. the later versions of this series, starting with landsat-4-5 are equipped with thematic mapper (tm) sensor systems, which generate a vector for different intensity responses, of each pixel, in seven lightinfrared spectral bands. with knowledge of different spectral responses of land covers it is possible to identify categories when analysing the vector data formats. this paper introduces a computerized procedure which is believed to be effective in identification of land covers. the method is particularly applicable to the thematic mapper system. it combines the linear analysis with the correlation procedures in specific formats, using a small number of reference identifiable categories in order to aggregatepinpoint the pixel contents (with small probability of error). fine identification of categories (such as the separation of cornwheat in the vegetation covers) is the subject of further promising applicability using this described computerized technique