

# Research on spatial deviation analysis model of land-use change

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**Abstract** The deviation analysis of space-time structure is based on GIS overlay. At present, the method in common use to describe deviation of expansion in spatial structure makes use of comparative analysis to study difference of various classification of land-use in spatial position. Although this method can draw the outline of spatial structure characteristic of land-use with object and brief advantages, its changed speed is not comparative in the strict sense because divided spatial units are not equal land areas. Thus the method above is improved in the paper by creatively importing the changing intensity index by average of year that the comparative new index can describe deviation of land-use spatial-temporal structure. Changing intensity index means that land-use changed area of a certain spatial unit is percentage of overall land area in different a certain period of research. In order to compare intensity or trend of urban land-use change in different period of research, changing intensity index in each spatial unit by average of year that has been calculated is a standard processing course is for its changing speed by average of year in land area of each spatial unit. The changing intensity index is comparative. Thus we can make a thorough research for land-use classification and obtain deviation situations of spatial-temporal structure for different land classification. The result will benefit the planning management of urban land-use of developed districts in China in the future.

**Key words:** Land-use; GIS space-time structure; Deviation analysis

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