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Predicting the areal development of the city of Mashhad with the automaton fuzzy cell method

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Rapid and uncontrolled expansion of cities has led to unplanned aerial development. In this way, modeling and predicting the urban growth of a city helps decision-makers. In this study, the aspect of sustainable urban development has been studied for the city of Mashhad. In general, the prediction of urban aerial development is one of the most important topics of modern town management. In this research, using the Cellular Automaton (CA) model and perceptron neural network method with satellite data developed for geo data of Geographic Information Systems (GIS) and presenting a simple and powerful model, a simulation of complex urban processes has been done. In finally our accuracy has been better compared to other researches that have been done in this field and we have slightly improved and optimize the final results approximately %92.1.

Keywords: Urban Modeling, sustainable development, Fuzzy Cellular Automaton, Geo-Information System. Perceptron neural network, Landsat.

Biography

Mehran Dizbadi is a researcher at the Faculty of Plastics Engineering and Surveying, University of Applied Sciences Wurzburg-Schweinfurt (FHWS), Bavaria, Germany.