

## عنوان مقاله:

Modeling of seismic vulnerability of urban buildings in geographic information system environment (case study: Babol city)

## محل انتشار:

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## خلاصه مقاله:

Introduction: Throughout history, humans have always been faced earthquakes as a natural disaster and incurred physical, social, economic and environmental harm. The best way to deal with this threat is being ready; one of the basic strategies is to have knowledge about the degree of vulnerability of the city against earthquake. Method: Different criteria are involved in modeling of the vulnerability of the city most of them are of the nature of the place; so, modeling of the vulnerability is a multi-criteria evaluation of the place. In this study, 11 criteria were extracted via reviewing previous researches and consulting the experts. Then, the modeling was done for Babol city, Iran, using fuzzy logic model and weighted linear combination method under conditions of uncertainty. Findings: Modeling in Babol city showed that 10%, 24%, 27%, 28% and 11% of the buildings were in the condition of very low, low, medium, high, and very high vulnerability. Conclusion: Babol city can be considered as vulnerable to earthquake as nearly 70% of the buildings were labeled "medium" to "high" vulnerable. Hence, basic interventions for crisis management should be taken on the agenda of the relevant officials before an earthquake occurs.

## کلمات کلیدی:

Structural vulnerability, Earthquake, Geographic information system, Multi-criteria evaluation, Fuzzy logic  
آسیب پذیری کالبدی، زلزله، سامانه های اطلاعات مکانی، ارزیابی چندمعیاره، منطق فازی.

## لینک ثابت مقاله در پایگاه سیویلیکا:

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