

## عنوان مقاله:

Uncertainty Modeling in Geotechnical Engineering Using Rough Set Theory

## محل انتشار:

ششمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1390)

تعداد صفحات اصل مقاله: 8

## نویسندگان:

m Arabani - Associate Professor, Dept .of Civil Engineering, University of Guilan , Guilan ,I.R. Iran

,m Pirouz - MSc Student of Geotechnical Engineering, University of Guilan , Guilan ,I.R.Iran

## خلاصه مقاله:

Civil engineers need to analyze and model uncertainty in many fields, such as the development of construction codes, analysis of natural hazards, decision making in infrastructure maintenance expenditure. Problems that are commonly encountered by geotechnical engineering require decision making under conditions of uncertainty, lack of knowledge, and ignorance. The lack of knowledge and ignorance can be related to the definition of a problem, the alternative solution methodologies and their results, and the nature of the solution outcomes. In this paper a new approach is introduced based on the Rough Set mathematical theory presented by Pawlak (1991), a well-known mathematician, this procedure is used for reasoning under uncertainties. An adequate understanding of the input parameters variability influence on the engineering computations output requires that the uncertainty itself is captured in mathematical terms. This paper is therefore intended to better prepare future analysts, how to model and analyze uncertainty, and how to select appropriate analytical tools for a particular problem in geotechnical and earthquake engineering.

## کلمات کلیدی:

Uncertainty modeling, Data classification, Rough sets, Decision making

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/115331>

