

Introduction for Volume 7, Issue 3

This issue contains 7 papers. There are 3 contributions written in English and 4 contributions in Chinese with English abstracts. The papers can be divided into three topics: hazard assessment, risk assessment and Internet of intelligences for monitoring risks

There are three papers in hazard assessment. In the first paper “A Note on Non-parametric Estimation of the Conditional Hazard Quantile Function” by El Hadj Hamel, Nadia Kadiri and Abbes Rabhi, the authors study an kernel estimator of the conditional hazard quantile function of a scalar response variable Y given a random variable X taking values in a semi-metric space and using the proposed estimator based of the kernel smoothing method. The almost complete consistency and the asymptotic normality of this estimate are obtained when the sample is an independence sequence. The second paper “Maximum Entropy-Based Model of High-Threat Landslide Disaster Distribution in Zhaoqing, China” by Shao-Xiong Yuan, Guang-Qing Huang, Hai-Xian Xiong, et al., puts forward a Maximum Entropy-Based Model of High-Threat Landslide Disaster Distribution in Zhaoqing, China. Landslide disaster that threatened over 100 people in Zhaoqing, China, were taken as samples. Sixteen environmental factors were selected. The suggested model was employed for simulation analysis of landslides. In the third paper “Major element geochemistry of LongShan Loess profile in the central Shandong mountainous regions, northern China” by Min Ding, Shuzhen Peng, Longjiang Mao, et al., the major elements of the Longshan loess profile on the northern piedmont zones and intermountain valleys of mountainous regions in central Shandong Province in northern China, have been systematically tested and been compared with the YHC loess in the Loess Plateau to reveal the geochemical characteristics and material sources of LS loess. It is found that the average chemical composition of Shandong LS profile is similar to that of typical loess at YHC profile.

There is one paper in risk assessment. The paper “Time Limit of the Probabilistic Risk for Natural Disaster”, by Jun Guo & Chongfu Huang, studies the period of validity of probabilistic risk for natural disaster. They considered that risk is for the future and meanwhile dynamic, the result of probabilistic risk analysis in natural disaster could just represent risk for a limited time, which is the timeliness of probabilistic risk.

There are three papers related to the Internet of intelligences. In the first paper “Principle of Internet of Intelligences and Development of its Core Technology” by Chongfu Huang, the author describe the principle of Internet of intelligences (IOI) and discuss the core technology in IOI, information diffusion technology. Then, the concept of intelligent mathematics is suggested to develop IOI, where the factor space theory could play role to express knowledge and being cognizant of thinking. Web mathematics would lay the foundation for intelligent mathematics. The second paper “A Research on Community Risk Radar with Presetting Forms to Structure Information in Internet of Intelligence” by Yifang Leng & Chongfu Huang, put forward some data forms of the collecting page in the community risk radar driven by IOI to reduce the proportion of unstructured information. Increase the image upload and download function can help residents building the risk scenarios. In the Risk event assessment stage, coding the PHP web page can achieve the online processing of risk data. Third paper is “A Study on Construction Method of Consensus Measure Space of Macro-seismic Anomalies”, by Weidan Wang & Chongfu Huang. With the IOI help, the authors set up the theory system of macro-anomalies group’s measure space which is expressed by the fuzzy relationship matrix, and puts forward the concept of macro-anomalies group.

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