

## عنوان مقاله:

Prediction of fragmentation due to blasting using mutual information and rock engineering system; case study:  
Meydook copper mine

## محل انتشار:

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## خلاصه مقاله:

One of the key outcomes of blasting in mines is found to be rock fragmentation which profoundly affects downstream expenses. In fact, size prediction of rock fragmentation is the first leap towards the optimization of blasting design parameters. This paper makes an attempt to present a model to predict rock fragmentation using Mutual Information (MI) in Meydook copper mine. Ten parameters are considered to influence fragmentation. On the other hand, Rock Engineering System (RES) is employed for sake of comparison between different methods. To validate the results, six blasting scenarios are selected out and compared with results of both models. The coefficients R2, RMSE and MAE were used in an attempt to assess the performance of presented models. The values of the coefficients R2, RMSE and MAE considering two methods of MI and RES for 30 blasting cycles are calculated as (0.81, 10.7, and 9.02) and (0.75, 11.87, and 9.61), respectively, implying the better capability of MI model to predict fragmentation

## کلمات کلیدی:

Blasting, Mutual Information, fragmentation, Rock Engineering System

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/665740>

