

Review of: "Strength criterion of rock mass considering the damage and effect of joint dip angle"

xianyu xiong

Potential competing interests: The author(s) declared that no potential competing interests exist.

It is highly significant to theoretically assess the effect, under load, of initial stress and structure on the mass damage of rock mass. In this reported study, first a multi-factor coupling damage constitutive model under the action of joint-load was established by fully considering the non-uniformity, anisotropy and initial structure of a rock mass based on the Weibull distribution and D-P criterion. The relationship between the damage evolution and joint angle in the rock mass was elaborated. Then, a jointed rock mass strength criterion was built in line with the D-P criterion and the limit state of rock mass failure by the method of multivariate function total differential as based on the constitutive model.