



# A discrete random model describing bedrock profile abrasion

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We use a simple, collision-based, discrete, random abrasion model to compute the profiles for the stoss faces in a bedrock abrasion process. The model is the discrete equivalent of the generalized version of a classical, collision based model of abrasion. Three control parameters (which describe the average size of the colliding objects, the expected direction of the impacts and the average volume removed from the body due to one collision) are sufficient for realistic predictions. Our computations show the robust emergence of steady state shapes, both the geometry and the time evolution of which shows good quantitative agreement with laboratory experiments.

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