Abstract Submitted
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Smoothing a Rock by Chipping[1] SIDNEY REDNER, PAUL KRAPIVSKY, Boston University — We investigate an idealized model for the size reduction and smoothing of a polygonal rock due to repeated chipping at corners. Each chip is sufficiently small so that only a single corner and a fraction of its two adjacent sides are cut from the object in a single chipping event. After a large number of chipping events, the shape is not circular, with the distribution of facet lengths and corner angles broadly distributed. In the long-time limit, the shape of the object is not a unique, but rather is characterized by large sample-to-sample fluctuations.

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