



## **Permeability of Fracture Faults Based on Worst Path Estimates**

H Auradou (1), L. Talon (1), and A. Hansen (2)

(1) Laboratoire FAST, Univ. Paris-Sud, Orsay, France, (2) Department of Physics, NTNU, Trondheim, Norway

We present a method for estimating permeability of fracture faults based on estimating the path with the smallest average of the cube of the fracture opening cutting across the sample normal to the average flow direction. The method is accurate even in the presence of contact area and for mechanical aperture going to zero to within a few per cent when compared to direct solution of the Darcy-Brinkman equation. In terms of computational speed it is comparable to calculating an average. This method gives new insight on the deviation from the cubic law of the permeability of fractures.

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