Ridge Network of Crumpled Paper CHRISTIAN ANDRESEN, ALEX
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TBUHL, Ecole et Observatoire des Sciences de la Terre — The work presented
has investigated the network formed by the complete sets of ridges from samples of
crumpled paper. Sheets of paper were crumpled, and their height profiles measured
by a laser profilometer. From these data lines of high curvature were identified as
ridges. Intersections between ridges were considered as nodes, and the ridges as links
between these nodes. The emerging networks have been investigated using network
theory. Properties such as the degree distribution, degree correlation and cluster-
ing coefficient are reported. These are compared to comparable random networks
and networks formed by the Voronoi diagrams. Spatial properties such as the ridge
length, domain area and vertex distributions have also been investigated.

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