

Brownian geometry*

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Abstract. We present different continuous models of random geometry that have been introduced and studied in recent years. In particular, we consider the Brownian sphere (also called the Brownian map), which is the universal scaling limit of large planar maps in the Gromov–Hausdorff sense, and the Brownian disk, which appears as the scaling limit of planar maps with a boundary. We discuss the construction of these models, and we emphasize the role played by Brownian motion indexed by the Brownian tree.

Keywords and phrases: Random geometry, Brownian sphere, Brownian disk, random planar map, scaling limit, Gromov–Hausdorff convergence, tree-indexed Brownian motion, Brownian tree

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