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Mean length of some random plane convex sets generated by the Brownian motion.

Denote by $C(1)$ the convex hull of the Brownian motion in the complex plane watched from time 0 to time 1. Let w be a primitive n th root of the unity. Denote by $C(n)$ the convex hull of the union of all $w^k C(1)$ for $k = 1, 2, ...n$. For instance, $C(2)$ is the symmetric convex hull of the above Brownian curve. The lecture will explain how to compute the mean perimeter of $C(n)$ for $n = 1, 2, 3, 4, 6$, and will consider also three other convex sets built with $C(1)$.