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On a Dyadic Parametrization of Curves

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Abstract. A "dyadic parametrization" of a (presumably non-rectifiable) curve in the complex plane is introduced, along with the notions of a dyadic tangent and a dyadic twist point. The parametrization of a curve leads to a tree of angles, to which we apply some theorems on probability. Using one sided inequalities of Paley Zygmund type, we find conditions for the set of points with dyadic tangents and the set of twist pionts to have Hausdorff dimension one.

Keywords. Conformal mapping, boundary properties, non-rectifiable curves, Kolmogorov's Theorem, one-sided estimates Lyapunov ratio condition.

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