Sampling the Lindelöf hypothesis for Dirichlet L-functions by random walks

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Abstract: Recently, Lifshits & Weber introduced a probabilistic model for the Riemann zeta-function on the critical line; more precisely, they proved the almost sure asymptotics for the discrete moment $\sum_{m\leq M}\zeta(1/2+iC_m)$ as $M\to\infty$, where C_m is the Cauchy random walk. We extend part of their results to Dirichlet L-functions to residue class characters and discuss their almost sure behaviour in the context of the generalized Lindelöf hypothesis.