Potential Theory for random fields and Hitting times for the stochastic wave equation with fractional colored noise

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Abstract:A basic problem of Potential Theory for random fields is presented, along with the minimum notions required to understand it. As an example of this, a stochastic wave equation with linear fractional colored noise is studied, sharp bounds results for the mild solution of this equation are presented and then used to establish upper and lower bound for the hitting probabilities of the solution in terms of the Hausdorff measure and of the Newtonian capacity