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Nonlinear Dirichlet problem of non-local branching processes

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Abstract

We present a method of solving a nonlinear Dirichlet problem with discontinuous boundary data and we give a probabilistic representation of the solution using the non-local branching process associated with the nonlinear term of the operator. The talk is based on joint works with Oana Lupascu-Stamate and Alexandra Teodor from Bucharest.