

On the existence and uniqueness for mixed local-nonlocal Dirichlet boundary value problems

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Abstract: By applying the method of monotone operators and techniques related to the method of sub-super solutions, we examine the existence and uniqueness of mixed local-nonlocal Dirichlet boundary value problems with convection depending on the gradient. We also consider the continuous dependence on parameters for such problems. To this end, we derive a parameter-dependent surjectivity theorem. Applications to problems involving an unbounded weight are also provided.