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CENTRO DE I&D EM MATEMÁTICA E APLICAÇÕES
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Grupo de Análise Funcional e Aplicações
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On the application of monotonicity methods 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 achieve this goal, we derive a parameter-dependent surjectivity theorem. Applications to problems involving unbounded weights are also provided. This talk is based on paper: M. Galewski, " On the existence and uniqueness for mixed local-nonlocal Dirichlet boundary value problems", to appear in Advances in Differential Equations, 2026.

Room Sousa Pinto
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