
Workshop dedicated to the memory of Professor Gabriela Kohr
(4th edition)

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Normal derivatives on the boundary of Hölder continuous solution of the Poisson equation

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Abstract

We plan to introduce a distributional form of the normal derivative on the boundary for Hölder continuous solutions of the Poisson equation, which may have infinite Dirichlet integral. Then we characterize the space for the first order traces of the normal derivatives and we present some application to the solution of the Neumann problem with distributional data. We exploit the layer potential theoretic method.