
Peter Ebenfelt and Michael Viscardi

**On the Solution of the Dirichlet Problem
with Rational Holomorphic Boundary Data**

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Abstract. We study the Dirichlet problem for the Laplace operator in a simply connected bounded domain Ω in $\mathbb{R}^2 \cong \mathbb{C}$ with boundary data that are rational functions of one complex variable. Our main result is a characterization of those domains Ω for which all solutions are rational in terms of the Riemann mapping to the unit disk and in terms of the Bergman kernel of the domain.

Keywords. Dirichlet problem, Bergman kernel, Riemann mapping.

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