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Width of the Gakhov class over the Dirichlet space is equal to 2

Kazantsev A.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, Pleiades Publishing, Ltd.Gakhov class G is formed by the holomorphic and locally univalent functions in the unit disk with no more than unique critical point of the conformal radius. Let D be the classical Dirichlet space, and let P: f ↦ F = f″/f′. We prove that the radius of the maximal ball in P(G)∩D with the center at F = 0 is equal to 2.

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Keywords

Bloch space, conformal radius, Dirichlet space, Gakhov class, Gakhov width, Hyperbolic derivative