

**Astala, Kari****Calderón's problem for Lipschitz classes and the dimension of quasicircles.** (English)

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Calderón's problem asks to determine those rectifiable curves  $\Gamma$  for which  $C_\Gamma$  defines a bounded operator on  $L^2(\Gamma)$  with

$$C_\Gamma f(z) = \frac{1}{2\pi i} \int_\Gamma \frac{f(\xi)}{\xi - z} d\xi.$$

In the interesting paper under review the author reviews a number of results related to this problem including its solution by G. David as well as related results by V. V. Salaev and M. Zinsmeister. The author shows that in the case when  $\Gamma$  is a quasicircle the following two conditions are equivalent:

- (1)  $C_\Gamma : \Lambda^\alpha(\Gamma) \rightarrow \Lambda^\alpha(\Gamma)$  is a bounded operator ( $\Lambda^\alpha(\Gamma)$  = the Lipschitz  $\alpha$ -class).
- (2)  $dist(z, \Gamma) \in A_p$ ,  $p = 1 + 1/(1 - \alpha)$  ( $A_p$  = the Muckenhoupt class).

Finally he shows that the Hausdorff and Minkowski dimensions of quasicircles are the same.

Reviewer: [M. Vuorinen](#)**MSC:****30E20** Integration, integrals of Cauchy type, integral representations of analytic functions in the complex planeCited in **5** Documents**Keywords:**[quasicircle](#)**Full Text:** [DOI](#) [EuDML](#)