Cauchy integral and singular integral operator over closed Jordan curves

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Abstract

© Springer-Verlag Wien 2014. This paper is mostly a review paper. It contains a description of old and recent results concerning the regularity conditions on a Jordan curve in the plane that imply the boundedness of the singular integral operator as well as the boundary behavior of the Cauchy type integral. These results are of significance for boundary value problems in domains with non-smooth and non-rectifiable boundaries.

Keywords

Boundary value problem, Cauchy integral, Singular integral operator