

**“Singular Integrals and  $A_p$  weights: an expository lecture”**

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Singular Integrals is one of the main topics of research in modern Harmonic Analysis. In this expository lecture we plan to give an overview of this area making emphasis on the relationship between Singular Integrals and the theory of  $A_p$  weights of Muckenhoupt. We will also consider variants of these operators such as commutators of Calderón-Zygmund operators with BMO introduced by Coifman-Rochberg-Weiss in the 70's. We will show the intimate connection of these operators with the theory of weights.