## INSTITUTUL DE MATEMATICĂ "SIMION STOILOW" AL ACADEMIEI ROMÂNE Conferința lunară

## Harmonic Analysis and Singular Integrals: an expository lecture

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**Abstract**: Singular Integrals is one of the main topics of research in Harmonic Analysis. In this expository lecture we plan to present an overview of this area making emphasis on the relationship between Singular Integrals and the theory of weights of Muckenhoupt. We will also consider variants of these operators such as commutators of singular integrals with B.M.O. functions. These operators were introduced by Coifman-Rochberg-Weiss and we will show the intimate connection of these operators with the theory of weights.