

LOCAL MAXIMAL OPERATORS ON MEASURE METRIC SPACES

CHIN-CHENG LIN, KRZYSZTOF STEMPAK, AND YA-SHU WANG

Abstract: The notion of local maximal operators and objects associated to them is introduced and systematically studied in the general setting of measure metric spaces. The locality means here some restrictions on the radii of involved balls. The notion encompasses different definitions dispersed throughout the literature. One of the aims of the paper is to compare properties of the ‘local’ objects with the ‘global’ ones (i.e. these with no restrictions on the radii of balls). An emphasis is put on the case of locality function of Whitney type. Some aspects of this specific case were investigated earlier by two out of three authors of the present paper.

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