Coifman, R. R.; **Meyer, Yves**; **Stein, Elias M.**
Some new function spaces and their applications to harmonic analysis. (English)
Zbl 0569.42016
J. Funct. Anal. 62, 304-335 (1985).

This paper is devoted to the definition of a new family of function spaces and to the investigation of their fundamental properties. These spaces, called "tent spaces" are of functions on $X \times \mathbb{R}_+$ where X is a Euclidean space and the spaces are so defined that the functions have "good" boundary values on the boundary X of this space. Such boundary values play a central role in harmonic analysis and the theory developed in this paper systemises a great deal of the earlier work. It is so rich in material that it is hardly possible in a short review to summarize the results in detail. To show the range of these methods the authors give a number of applications at the close of this paper, to maximal functions, to the Hilbert transform and to the theory of Hardy spaces.

Reviewer: S. J. Patterson

MSC:

42B25	Maximal functions, Littlewood-Paley theory
31B25	Boundary behavior of harmonic functions in higher dimensions

Cited in **14** Reviews
Cited in **206** Documents

Keywords:

tent spaces; maximal functions; Hilbert transform

Full Text: DOI

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