Tuomas Hytönen: *Vector-valued wavelets and the Hardy space $H^1(\mathbb{R}^n; X)$*; Helsinki University of Technology Institute of Mathematics Research Reports A461 (2003).

Abstract: *We prove an analogue of* Y. MEYER*'s wavelet characterization of the Hardy space $H^1(\mathbb{R}^n)$ for the space $H^1(\mathbb{R}^n; X)$ of X-valued functions. Here X is a Banach space with the UMD property. The proof uses results of* T. FIGIEL *on generalized Calderón–Zygmund operators on Bôchner spaces and some new local estimates.*

AMS subject classifications: 42B30, 42C40, 46E40

Keywords: wavelet basis, atomic decomposition, generalized Calderón–Zygmund operators, UMD-space

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