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**Local means, wavelet bases, wavelet representation and wavelet isomorphisms  
in Besov-Morrey and Triebel-Lizorkin-Morrey spaces**

We consider local means with bounded smoothness for Besov-Morrey and Triebel-Lizorkin-Morrey spaces. Based on those we derive characterizations of these spaces in terms of Daubechies, Meyer, Bernstein (spline) and more general  $r$ -regular wavelets, lastly for wavelets which can serve as local means. Hereby both, local means and wavelet decompositions satisfy natural conditions concerning smoothness and cancellation (moment conditions). Moreover, the wavelet representations are unique and yield isomorphisms between function spaces and appropriate sequence spaces of wavelet coefficients. We also prove that these wavelet representations lead to wavelet bases if, and only if, the Morrey type function spaces coincide with certain classical Besov-Triebel-Lizorkin spaces.