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Extension and approximation for VMO on a domain

In joint work with Almaz Butaev, we study the question of extension of functions of vanishing mean oscillation on a domain $\Omega \subset \mathbb{R}^n$ to $VMO(\mathbb{R}^n)$. For the case of bounded mean oscillation (BMO), it was shown by P. Jones (1980) that a bounded extension is possible if and only if Ω is a uniform domain. By suitably modifying Jones' extension we are able to use a single operator to extend BMO and VMO as well as other function spaces. This question turns out to be related to approximation of VMO functions by Lipschitz functions. We also study the question in the local setting.