

**Mihailov, Dobrinca; Stan, Ilie**

**Quasi-normed operator ideals on Banach spaces and interpolation.** (English) Zbl 1052.46061  
Novi Sad J. Math. 31, No. 2, 15-26 (2001).

The authors apply the  $K$ -method of real interpolation [see, e.g., *C. Bennett* and *R. Sharpley*, *Interpolation of Operators*, Academic Press (1988; [Zbl 0647.46057](#))] to the quasi-normed operator ideals on Banach spaces [see, e.g., *A. Pietsch*, *Operator Ideals*, Berlin (1978; [Zbl 0399.47039](#))] to show how new operator ideals can be obtained. In particular, they prove the following variant of reiteration theorem: Let  $(\mathcal{A}, a)$  and  $(\mathcal{B}, b)$  be two quasi-normed operator ideals on Banach spaces, and  $\mathcal{C}_{\theta_0, p_0} = (\mathcal{A}, \mathcal{B})_{\theta_0, p_0}$ ,  $\mathcal{C}_{\theta_1, p_1} = (\mathcal{A}, \mathcal{B})_{\theta_1, p_1}$ , where  $0 < \theta_i < 1$ ,  $1 \leq p_i < \infty$ ,  $i = 0, 1$ . Then  $(\mathcal{C}_{\theta_0, p_0}, \mathcal{C}_{\theta_1, p_1})_{\eta, p} = \mathcal{C}_{\theta, p}$ , with equivalent norms, where  $\theta = (1 - \eta)\theta_0 + \eta\theta_1$ ,  $0 < \eta < 1$ ,  $1 \leq p < \infty$ .

Reviewer: [Zoran Kadelburg](#) (Beograd)

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[46M35](#) Abstract interpolation of topological vector spaces  
[47L20](#) Operator ideals

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