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**A joint functional calculus for sectorial operators with commuting resolvents.** (English)

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Proc. Lond. Math. Soc., III. Ser. 77, No. 2, 387-414 (1998).

We study the notion of joint functional calculus associated with a couple of resolvent commuting sectorial operators in a Banach space  $X$ . We present some positive results when  $X$  is for example a Banach lattice or a quotient of subspaces of a  $B$ -convex Banach lattice. Furthermore, we develop a notion of generalized  $H^\infty$  functional calculus associated with the extension to  $\Lambda(H)$  of a sectorial operator on a  $B$ -convex Banach lattice  $\Lambda$ , where  $H$  is a Hilbert space. We apply our results to a new construction of operators with a bounded  $H^\infty$  functional calculus and to the maximal regularity problem.

Reviewer: C.Le Merdy (Besancon)

**MSC:**

47A60 Functional calculus for linear operators  
47D06 One-parameter semigroups and linear evolution equations  
46H30 Functional calculus in topological algebras

Cited in **1** Review  
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**Keywords:**

joint functional calculus; resolvent commuting sectorial operators;  $B$ -convex Banach lattice; generalized  $H^\infty$  functional calculus; maximal regularity problem

**Full Text:** [DOI](#)