

---

**1022.46017**

**Cwikel, Michael; Kalton, Nigel; Milman, Mario; Rochberg, Richard**  
**A unified theory of commutator estimates for a class of interpolation methods.** (English)

Adv. Math. 169, No.2, 241-312 (2002). [ISSN 0001-8708]

<http://dx.doi.org/10.1006/aima.2001.2061>

In this interesting paper, a general family of interpolation methods is introduced which includes, as special cases, the real and complex methods and also the so-called  $\pm$  method defined by Peetre.

Derivation operators  $\Omega$  and translation operators  $\mathcal{R}$  are introduced for all methods of this family. A theorem is proved about the boundedness of the commutators  $[T, \Omega]$  and  $[T, \mathcal{R}]$  for operators  $T$  which are bounded on the spaces of the pair to which the interpolation method is applied.

This extends and unifies results previously known for derivation and translation operators in the contexts of real and complex methods.

*Nicolae Popa (București)*

*Keywords* : derivation operator; commutator estimate; pseudolattice; real interpolation; complex interpolation; plus-minus interpolation method; Lions-Schechter interpolation space

*Classification* :

\*46B70 Interpolation between normed linear spaces

46H35 Topological algebras of operators

Cited in ...