

**Diagana, Tocka**

**Linear operators sum and Kato-McIntosh's conjecture. (Sommes d'opérateurs et conjecture de Kato-McIntosh.)** (French) [Zbl 0951.47001](#)

C. R. Acad. Sci., Paris, Sér. I, Math. 330, No. 6, 461-464 (2000).

The paper under review deals with regular (sectorial, closed and densely defined) forms on a fixed complex Hilbert space satisfying Kato's condition. We recall that a regular form  $\psi$  (or the  $m$ -sectorial operator  $A$  uniquely associated with  $\psi$ ) is said to satisfy Kato's condition if the domain of  $A^{1/2}$  equals the domain of  $(A^*)^{1/2}$  and they coincide with the domain of the form  $\psi$ .

The author proves that one can associate a maximal accretive operator satisfying Kato's condition with the sum of two regular forms which satisfy some assumptions concerning the intersection of their domains. As a consequence, if  $A$  and  $B$  are two linear  $m$ -sectorial operators satisfying Kato's condition then, in some additional hypotheses, there exists a unique  $m$ -sectorial operator  $A \oplus B$  which satisfies the same condition and is the maximal accretive of the algebraic sum  $A + B$ . Under certain assumptions on two maximal accretive operators  $A$  and  $B$ , more information is given on the numerical range of  $A \oplus B$  in terms of numerical ranges of  $A$  and  $B$ ; in other words,  $A \oplus B$  satisfies the spectral condition of McIntosh whenever  $A$  and  $B$  do.

Reviewer: [Daniel Beltita \(București\)](#)

**MSC:**

[47A05](#) General (adjoints, conjugates, products, inverses, domains, ranges, etc.)

[Cited in 1 Document](#)

[47A07](#) Forms (bilinear, sesquilinear, multilinear)

[47B44](#) Linear accretive operators, dissipative operators, etc.

[47A12](#) Numerical range, numerical radius

**Keywords:**

*m*-sectorial operator; *m*-accretive operators; regular sesquilinear form; Kato's condition; numerical range; spectral condition of McIntosh

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