

Semigroups of multiplicative operators and applications

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Abstract

In the first section of this note a short introduction is given. It contains the main notions and results. In the second section it is shown that to any locally bounded semigroup we can associate a projective family of locally bounded semigroups acting on Banach spaces which are closely connected with the initial semigroup. A Hille-Yosida type theorem for bounded semigroups acting on locally convex spaces is stated. On the other hand it is pointed out that any multiplicative operator generates a locally bounded semigroup. We proved in addition that any abstract Cauchy problem associated to a generator of a locally bounded semigroup has a unique solution.