

Locally Eventually Positive C_0 -semigroups

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In the last few years, there has been significant development in the theory of eventually positive operator semigroups along with examples of several applications. One way to generalize this, is to consider semigroups that are locally eventually positive, i.e., strongly continuous semigroups which become positive for large times only in some part of the domain. In recent years, examples of local eventual positivity of solutions of certain differential operators have emerged.

In this talk, we look at local eventual positivity of semigroups on L^p -spaces. We first present certain sufficient conditions and then look at a few applications of the same. Moreover, we look at some spectral consequences of local eventual positivity.