



# CSC Seminar

## SPEAKER

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## TITLE

**On the asymptotic behavior of semigroups on some dense sets**

## ABSTRACT

We present results on the asymptotic behavior of unbounded  $C_0$ -semigroups, such that  $\|T(t)\| \leq f(t)$  where  $\limsup_{s \rightarrow +\infty} \|\frac{f(t+s)}{f(s)}\| = e^{\omega_0}$ . We show that  $\lim_{t \rightarrow +\infty} \|\frac{T(t)(A-\lambda)^{-1}\| \|f(t)\| = 0$  under certain constraints on the spectrum of the generator  $A$ . It extends some existing results, in particular allowing for  $(\omega_0(T) + i\mathbb{R}) \cap \sigma(A) \neq \emptyset$ . We also present some results on stability of bounded semigroups on the image of the generator for a class of generators with singleton spectrum.

Tuesday, January 25, 2022 at 2 pm

BBB