

# Amenability and Finite Dimensional Invariant Subspace Properties for Semigroups

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## Abstract

Let  $S$  be a semigroup and  $m(S)$  be the Banach space of bounded real-valued functions on  $S$ .  $S$  is called left amenable if there is a non-zero left translation invariant linear functional on  $m(S)$ . Examples of amenable semigroups include commutative semigroups and solvable groups.

In this talk I shall discuss some recent results concerning of amenability and Ky Fans finite dimensional invariant subspace property as well as their generalizations to Banach algebras.