Semigroup $C^*$-algebras

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Abstract

The semigroup $C^*$-algebra of a cancellative semigroup is the $C^*$-algebra generated by the regular representation of the semigroup. The first example of such a $C^*$-algebra is the classical Toeplitz algebra. Recently, there has been a revival of the subject of semigroup $C^*$-algebras due to interesting new classes of examples, which can be divided into two types: Semigroups which naturally appear in group theory, and semigroups attached to rings from number theory or algebraic geometry. The goal of the talk is to give an overview of these recent developments.