

## ON CONVOLUTION ALGEBRAS

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By introducing a convolution product on a certain Fourier series, we form a Fourier semigroup. It is shown that the Fourier semigroup has a maximal idempotent subsemigroup and has no identity. We show that the set of all polynomials over a complex field forms a commutative convolution algebra and has no non-zero idempotent. We obtain necessary and sufficient conditions for measures to be idempotent measures on finite semigroups of order  $\leq 4$ . Finally we show that the set of all fundamental measures on a topological fuzzy semigroup under a certain convolution product forms an idempotent commutative semigroup.

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