$\mathcal{I}$-Convergent Functions Defined On Amenable Semigroups

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Abstract

In this paper we firstly introduce and study the concepts of \linebreak $\mathcal{I}$-convergence, $\mathcal{I}^*$-convergence, $\mathcal{I}$-Cauchy sequence and $\mathcal{I}^*$-Cauchy sequence of functions defined on discrete countable amenable groups, where $\mathcal{I}$ is an ideal of subsets of the amenable semigroup G. Secondly, we introduce and examine $\mathcal{I}$-limit points and $\mathcal{I}$-Cluster points of functions defined on discrete countable amenable groups. Finally, we introduce and investigate $\mathcal{I}$-limit superior and $\mathcal{I}$-limit inferior of functions defined on discrete countable amenable groups.

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