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Classifications and characterizations of Baire-1 functions

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Abstract: Kechris and Louveau in [5] classified the bounded Baire-1 functions, which are defined on a compact metric space K , to the subclasses $\mathcal{B}_1^\xi(K)$, $\xi < \omega_1$. In [8], for every ordinal $\xi < \omega_1$ we define a new type of convergence for sequences of real-valued functions (ξ -uniformly pointwise) which is between uniform and pointwise convergence. In this paper using this type of convergence we obtain a classification of pointwise convergent sequences of continuous real-valued functions defined on a compact metric space K , and also we give a characterization of the classes $\mathcal{B}_1^\xi(K)$, $1 \leq \xi < \omega_1$.

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