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STRONG COMPLETENESS PROPERTIES IN $C_p(X)$

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Let $C_p(X)$ be the set of all continuous, real-valued functions on X , with the topology of pointwise convergence. For non-discrete X , it is possible but somewhat unusual for $C_p(X)$ to have the Baire Category Property (BCP), i.e., the intersection of countably many dense, open subsets is dense. In this talk we discuss the role of completeness properties that are stronger than BCP in $C_p(X)$, e.g., subcompactness, domain representability, Choquet completeness, and pseudo-completeness) and we pose a family of questions.

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