# Constructions of nonstandard Cantor sets in the 3–space, Parts I and II

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The first talk will be a historical survey on wild Cantor sets in $R^3$, the first such set being constructed by Louis Antoine already in the 1920's in his Dissertation, after he was blinded while serving in the French army during WWI. In the main part of the talk we shall present a new general technique for constructing wild Cantor sets in $R^3$ which are nevertheless Lipschitz homogeneously embedded into $R^3$. Applying the well-known Kauffman version of the Jones polynomial we shall show that our construction produces even uncountably many topologically inequivalent wild Cantor sets in $R^3$. These Cantor sets have the same number of components in the interior of each stage of the defining sequence and are Lipschitz homogenous. In the second talk we shall discuss topology of rigid objects in $R^n$ and then present a new construction of uncountably many distinct rigid wild Cantor sets in $R^3$ with simply connected complement. In conclusion, we plan to state some open problems and conjectures.