

The realization problem of attractors for knotted toroidal sets

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A *toroidal set* is a compactum $K \subseteq \mathbb{R}^3$ that possesses a basis of neighborhoods comprised of solid tori and is not cellular. It is said to be *unknotted* whenever it has a basis comprised of unknotted tori. Otherwise K is said to be a *knotted toroidal set*. In this talk we shall present necessary and sufficient conditions for a knotted toroidal set to be realized as an attractor for a homeomorphism of \mathbb{R}^3 . We shall also see how to construct uncountably many toroidal sets that cannot be realized as attractors in both the knotted and unknotted cases. These results have been obtained in collaboration with J.J. Sánchez-Gabites.