Todorčević' trichotomy and a hierarchy in the class of tame dynamical systems

Eli Glasner

glasner@math.tau.ac.il

I will briefly review the newly developed theory of tame dynamical systems and then show how Todorčević' trichotomy in the class of separable Rosenthal compacta is reflected as a hierarchy in the class of tame dynamical systems (X, T) according to the topological properties of their enveloping semigroups $E(X)$. More precisely, I will define the classes

$$\mathrm{Tame}_{\mathbf{2}} \subset \mathrm{Tame}_{\mathbf{1}} \subset \mathrm{Tame},$$

where $\mathrm{Tame}_{\mathbf{1}}$ is the proper subclass of tame systems with first countable $E(X)$, and $\mathrm{Tame}_{\mathbf{2}}$ is its proper subclass consisting of systems with hereditarily separable $E(X)$. Some general properties of these classes will be discussed and I will exhibit some examples to illustrate these properties. This is a joint work with Michael Megrelishvili.