Choquet simplex of invariant measures for minimal homeomorphisms on manifolds

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It is well known that a topological dynamical system's set of invariant measures is a nonempty metrizable Choquet simplex. In 1991, Downarowicz showed that all such simplices arise as the set of invariant measures of a class of minimal subshifts. Hence, we can ask: Which nonempty Choquet simplices can be realized as sets of invariant measures for minimal homeomorphisms on manifolds? It is known that for one-dimensional manifolds, the geometry of manifolds restricts the available dynamics. In particular, minimal homeomorphisms of the circle are uniquely ergodic. During the talk, we will discuss a class of minimal homeomorphisms of the Cantor set whose dynamics can be quite faithfully realized as minimal homeomorphisms on manifolds. Consequently, we will prove that every Choquet simplex is realized as a set of invariant measures of a minimal homeomorphism on every manifold of dimension two and higher carrying a minimal uniquely ergodic homeomorphism.