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Decision procedures for the sentences true in certain metric structures

After establishing a completeness theorem for continuous logic (JSL 75, 2010), Ben Yaacov and Pedersen conclude that if T is a complete recursive $\mathcal{L}$-theory in continuous logic, and $v(A)$ is the truth value of the $\mathcal{L}$-sentence A in models of T, then $v(A)$ is a recursive real uniformly recursive in A. Among the examples to which the latter result applies are theories of atomless probability structures, the (bounded) Urysohn space, Hilbert space, the l-group or l-ring of real-valued continuous functions on the Cantor set, and the complex *-algebra of continuous functions on the Cantor set. This talk will explain why these examples obey stronger results yielding, for example, decision procedures for the sentences true in these structures.