Perfect set dichotomy theorem in generalized Solovay model

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The perfect set dichotomy for an equivalent relation E on $\mathbb{R}$ asserts that either $\mathbb{R}/E$ is wellorderable or there exists a perfect set of E-inequivalent reals. In this talk, we show that this dichotomy holds for each equivalent relation on $\mathbb{R}$ in the Solovay model $V(\mathbb{R}^{V[G]})$. Furthermore, we consider a generalization of the Solovay model, which is obtained by collapsing an inaccessible cardinal to the successor cardinal of an uncountable regular cardinal μ. We show that the perfect dichotomy theorem for μ^μ holds in the generalized Solovay model. This is a joint work with Hiroshi Sakai.