1106-03-513 **Åsa Hirvonen*** (asa.hirvonen@helsinki.fi), Department of Mathematics and Statistics, P.O. Box 68, 00014 University of Helsinki, 00014 Helsinki, Finland. *Measuring independence in metric model theory.*

Metric model theory studies structures whose domain is a (complete) metric space. One of the peculiarities with these structures is that allowing for small changes to the structures one enhances the stability theoretic properties of the model classes.

Working in the framework of metric abstract elementary classes (adapted from Shelah's abstract elementary classes) one may generalize the notion of isomorphism, enabling the built in treatment of perturbations and thus making use of the enhanced stability. I will show how one can use this enhancement to develop a measure of dependence in a homogeneous metric abstract elementary class with perturbations that is superstable with respect to a perturbation topology, weakly simple and has complete type spaces. The measure is such that having zero dependence coincides with being independent. Time permitting I will show how this measure of dependence can be used for a criterion for finding pregeometries in M^{eq}.

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