1016-03-197　　　　　**Itay Ben-Yaacov***, UW Math Dept, 480 Lincoln Dr, Madison, WI 53706. *Continuous logic and perturbations of metric structures.*

Continuous first order logic serves as a setting for a model-theoretic treatment of metric structures. Some classical results of first order logic generlise quite well to continuous logic (e.g., Ryll-Nardzewski's and Morley's theorems), while others are hopeless (e.g. Vaught's no-2-models theorem). It was recently suggested that questions about the "number of models up to isomorphism" should be weakened to "number of models up to perturbations". Most of the positive precise results still hold one way or another with perturbations added, while the previously negative results now become wide open.

　　I will survey what is known, and what we would like to know, on these matters. (Received February 12, 2006)