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Gabor Elek and **Balasz Szegedy*** (szegedy@math.toronto.edu). *Non standard methods in hypergraph theory*. Preliminary report.

We demonstrate a new measure theoretic method based on the ultra product of finite measure spaces which gives short proofs for results in hypergraph theory such as the regularity lemma and the testability of hereditary hypergraph properties. We prove several new results about hypergraphs, sampling, hypergraph sequences, various convergence notions and limit objects. (Received August 27, 2008)