1030-03-276 **Meeri Kesl*** (`kesala@math.uic.edu`), University of Illinois at Chicago, Dept. of Math. Stat. and Computer Science, 851 S. Morgan Street, Chicago, IL 60607-7045. *Independence in Finitary Abstract Elementary Classes.*

We introduce a nonelementary framework of *finitary classes*, refining the context of abstract elementary classes presented by Saharon Shelah.

We have collected a set of properties for classes of structures, which enable us to develop a 'geometric' approach to stability theory, including an independence calculus, in a very general framework. We study AEC's with amalgamation over models, joint embedding, arbitrarily large models, countable Löwenheim-Skolem number and finite character. The novel idea is the property of finite character, which makes possible various constructions from elementary model theory. This context generalizes both contexts of *homogeneous classes* and *excellent classes*.

Notions of simplicity, superstability, Lascar strong type, a-primary model and U-rank are inroduced for finitary classes. A categoricity transfer result is proved for simple, tame finitary classes: categoricity in any uncountable cardinal transfers upwards and to all cardinals above the Hanf number. Unlike the previous categoricity transfer results for AEC's the theorem does not assume the categoricity cardinal being a successor. This is joint work with Tapani Hyttinen from the Unversity of Helsinki. (Received August 05, 2007)