Capturing convergence through changing the logic

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In recent years we have witnessed an unprecedented confluence of methods from discrete and continuous mathematics, especially in subjects having to do with logic and topology. One can cite fields such as continuous model theory, homotopy type theory and, most relevant to this talk, combinatorial limits. The latter have started from the notion of graphons and have been generalised to other objects, including the very general Stone pairings. In this subject one looks at uncounta ble limits of a countable sequence of finite objects, with various logical properties that carry through. In the context of first order logic, one can think of Los's theorem for ultraproducts, but various other transfer theorems have been obtained in other contexts. In this talk we shall review some of these notions and then connect them with the study of abstract logics through new satisfaction relations, and the comparison between such logics using Chu transforms.