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**XAVIER CAICEDO**, Universidad de los Andes, Bogotá

*A Lindström's theorem for continuous logic*

Oversimplifying, continuous logic has his prehistory in Chang's work on Łukasiewicz predicate logic and Chang and Keisler monograph on logic with values in compact Hausdorff spaces. It had an independent revival in Krivine's successful use of model theoretic methods in Banach spaces, work continued by Henson and Iovino and generalized to metric spaces by Ben Yaacov and Usvyatsov. The analogue of Lindström's characterization of elementary logic in terms of compactness and the downward Löwenheim-Skolem property holds for continuous logic, even if we allow infinitary continuous predicates. The main tools we utilize to prove this maximality result are a natural notion of approximation which behaves well in compact extensions, and a characterization of equivalence of models in continuous logic by means of partial approximations. Some topological ideas are useful also. We will comment other characterizations of continuous logic in the vein of Lindström.