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**C. Ward Henson\***, Mathematics Department, University of Illinois, 1409 West Green Street, Urbana, IL 61801. *Application topics for the  $[0, 1]$ -valued continuous version of first-order logic*. Preliminary report.

During the last few years the model theory of a continuous version of first-order logic has been developed; see [1],[2]. This talk will briefly discuss some of the mathematical topics to which this model theory has been or is being applied. These include probability and ergodic theory,  $L^p(\mu)$  Banach lattices and other structures from functional analysis, and topics in metric space geometry such as properties of Urysohn's universal metric space.

[1] Itai Ben Yaacov, Alexander Berenstein, C. Ward Henson, and Alexander Usvyatsov, *Model theory for metric structures*, to appear in a Newton Institute volume in the Lecture Notes series of the London Math. Society, 112 pp. Available at <http://www.math.uiuc.edu/~henson/cfo/mtfms.pdf>.

[2] Itai Ben Yaacov and Alexander Usvyatsov, Continuous first order logic and local stability, submitted. Available at <http://math.univ-lyon1.fr/~begnac/articles/cfo.pdf> (Received July 24, 2007)