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Topology and Logic.

Let us take topology to be the study of mathematical properties preserved by continuous deformation, and logic to be the study of truth through deductive reasoning in a formal language. As continuity depends on the infinitary notion of limit, and deductions are finite, there seems to be little commonality between these subjects. But today's pervasive influence of computers in mathematics necessitates that topologists understand how continuous deformation is to be programmed, and conversely that computer programmers have more access to topology to model their computations. Today's talk will survey how topology & logic have been steadily growing closer during the past century, and then present our own research upon developing a middle way for topology and logic. (Received September 04, 2012)