

1116-01-415 **Nicholas A Scoville*** (nscoville@ursinus.edu), Ursinus College, Math and CS, 601 E. Main Street, Collegeville, PA 19426. *The Cantor set before Cantor*. Preliminary report.

The Cantor set is the quintessential counterexample in topology. Defying many of our topological intuitions, this set bearing Georg Cantor's name even has a natural generalization. However, this general Cantor set was first written down and studied in the context of integrable discontinuous functions by Henry J. S. Smith in 1875, eight years before Cantor himself introduced the set. In this talk, we will look at the problem that motivated Smith to define this set, building a bridge between the calculus familiar to students and the less familiar topology. (Received August 31, 2015)