1096-01-791 **Craig G Fraser*** (craig.fraser@utoronto.ca), Inst. Hist. & Phil. of Sci. & Tech., Victoria College, University of Toronto, Toronto, Ontario M5S 1K7, Canada. *Infinitesimals in Analysis 1780-1830.* Preliminary report.

In 1982 Joe Dauben explored the implications of Abraham Robinson's invention of non-standard analysis for the history and philosophy of mathematics. Dauben drew attention to a body of historical work – concentrated mainly on Augustin-Louis Cauchy – that centered on a reevaluation of the concept of infinitesimal in light of Robinson's (and other's) discoveries.

While not particularly focused on Robinson's work itself, my paper will contribute to the discussion through an examination of infinitesimals and the logic of the calculus around 1800. The emphasis will be on mathematical issues. I evaluate the role infinitesimals played in new mathematical work of the period, and the extent to which they posed foundational issues for researchers. Particular attention will be devoted to the place of infinitesimals in Cauchy's writings on analysis.

Reference

Joseph W Dauben, "Abraham Robinson and Nonstandard Analysis: History, Philosophy, and Foundations of Mathematics." *History & Philosophy of Modern Mathematics. Volume 11: Minnesota Studies in Philosophy of Science.* 1988. Eds. William Aspray and Philip Kitcher. Pp. 177-200. University of Minnesota Press. (Received September 10, 2013)