

1145-AK-2181 **Robert A. Beezer*** (beezer@ups.edu), **David W. Farmer**, **Thomas W. Judson**, **Susan Lynds**, **Vilma Mesa** and **Kent Morrison**. *UTMOST: Undergraduate Teaching of Mathematics with Open Software and Textbooks*.

UTMOST designs and implements tools for authors and publishers of open source textbooks, and studies the use of these textbooks by teachers and students in undergraduate courses.

We will describe some of the novel features of the online versions of textbooks authored in PreTeXt, especially those supporting, and encouraging, established active learning techniques. We will present findings from our educational research, along with the design of our upcoming, larger, study. A theme of the presentation will be the ways in which our development effort and research studies complement each other. (Received September 25, 2018)