

1056-N5-1050      **Robert A Beezer\*** ([beezer@ups.edu](mailto:beezer@ups.edu)), Mathematics Department, University of Puget Sound,  
1500 N Warner, Tacoma, WA 98416-1043. *Textbooks as Sage Notebooks.*

Sage is free, open-source mathematics software designed to become a viable alternative to Magma, Maple, Mathematica and Matlab. Besides extremely powerful routines for computing a wide spectrum of mathematical objects, Sage includes a “notebook” interface which uses standard web browsers to provide a familiar means for interacting with the program on a remote server such as [sagenb.org](http://sagenb.org). The principal technology used by the notebook to render mathematics is jsMath.

This talk will demonstrate a pilot project to convert textbooks authored in  $\text{\LaTeX}$  to Sage worksheets as part of a Sage notebook. An author can use the vast array of packages available for  $\text{\LaTeX}$  to create new content, and Sage code can be incorporated. Upon automated conversion to jsMath and the Sage worksheet format, the resulting worksheet displays high-quality mathematics and incorporates the Sage code as executable blocks, runnable and editable by the reader. Sage has excellent support for  $\text{\LaTeX}$  output and the notebook includes a lightweight word processor, so a reader can annotate their work with more Sage code and similarly impressive mathematical content. (Received September 20, 2009)