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**Steven M. Hetzler\*** ([smhetzler@salisbury.edu](mailto:smhetzler@salisbury.edu)), Department of Math & CS, Salisbury University, Salisbury, MD 21801, and **Robert M. Tardiff**. *A Sonification Mathlet for Calculus, Pre-Calculus, and Analytic Geometry*. Preliminary report.

Sonification is the use of non-speech audio to convey information. We use a Mathlet to integrate sonification into calculus instruction. Our Mathlet is an Excel spreadsheet with supporting Visual Basic code that allows students to interactively sonify a function, its derivative, or selected points on a graph. It also represents the function visually as a table of values and a formula. This talk demonstrates three activities we are using in Fall 2005: one for learning to interpret sonifications, one for studying limits, and one for studying relationships between  $f(x)$  and  $f'(x)$ . Preliminary student learning data are presented. We also summarize two activities planned for Fall 2006: one for studying extreme points and critical points, and one for studying integrals. This Mathlet allows students to experiment with mathematics and hear the results, because it is portable, exploits the pervasiveness of Excel, and adapts easily to other contexts. Students can change several parameters; e.g., the function, and get experience with an emerging tool for studying data. (Received September 28, 2005)