

## An ultrasound analyzer tool built from National Instruments LabView software

Stefan A. Frisch & John W. Lum  
University of South Florida

This talk will present an overview of a measurement tool for digital video recorded from a midsagittal ultrasound of the tongue (though the tool can be used with any video of NTSC format). The tool is windows-based and allows the user to load videos up to approximately 5 GB in size. In addition to the ultrasound image frames, the tool also displays a waveform for the sound during the current frame, and a waveform for a window of 100 frames. The tool can be used to play back small portions of the video, and to step frame-by-frame forward or backward. For measurement, the tool provides a user-specified number of measurement points that can be dragged by mouse or nudged using keyboard keys. These points allow manual measurement of any number of key locations on the ultrasound image. Current point locations (x,y coordinates) are recorded in a running text window along with the frame number and time in seconds. The data are stored in a format that is easily inserted into a spreadsheet for additional analysis. There will be a demonstration of the use of the tool for measuring velar consonant production data.