

Abstract Submitted  
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**Examination of the Vocal Fold Paralysis on the Fluid Dynamics of the Glottis** ERICA SHERMAN, University of Nebraska, MICHAEL KRANE, Penn state ARL, LUCY ZHANG, RPI, TIMOTHY WEI, University of Nebraska — This talk is coupled to the symmetric vocal fold oscillation study presented in Halvorson, *et al.* In this study, one of the two symmetric vocal fold models was allowed to remain rigid while the other model was driven through a normal oscillation cycle. Again, a range of reduced frequencies were studied corresponding to physiological frequencies from 100 – 200 Hz. Flow measurements showing jet velocity and orientation, vortex shedding as a function of time through an oscillation cycle will be presented. Experimental data has been phase averaged to highlight characteristic differences between male and female voices. Additionally, volumetric flow rate and glottal behavior will be presented to show recurring features in phonation during an oscillation cycle. An example of differences between the paralysis case and the symmetrically oscillating vocal fold case is that the Coanda effect develops much more quickly and predictably for the paralysis case. Additional comparisons between diseased and healthy conditions will be presented and discussed. Supported by the NIH.

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