ACOUSTICS2008/131
Implications of the fluctuating drag force voice source

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A recently published paper on the aeroacoustics of the voice source calculates the acoustic source of voice caused by fluctuation drag forces [Howe, M. S. and McGowan, R. S., J. Fluid Mech., 592, 367-92]. There are two extensions to this calculation that will be presented: 1) inclusion of the ventricular folds downstream of the vocal folds, and 2) the fluid-structure interaction at the vocal folds. For the ventricular folds, the effect of tissue shape on the drag forces will be investigated in terms of the shape's effect on the relation between the Lamb vector and the Kirchoff vector. Regarding the fluid-structure interaction at the vocal folds, the two-mass model will be examined in light of the recently published calculation of drag forces. [Work supported by grant NIDCD-004688 to Dr. G. S. Berke of UCLA.]