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Benchmarking objective voice measures in a physical model of phonation¹ MICHAEL MCPHAIL, Mayo Clinic, GAGE WALTERS, Penn State University, STEFANIE ZACHARIAS, DAVID LOTT, Mayo Clinic, MICHAEL KRANE, Penn State University — This talk describes a benchmarking of objective measures of voice quality in a physical model of phonation. The physical model is composed of silicone rubber vocal fold models housed in a life-sized vocal tract. Different model vocal fold designs were used to mimic a range of vocal fold vibration patterns. Measurements of time-averaged quantities and fundamental frequency are compared to others in the literature. Clinically relevant objective measures of voice quality were calculated from radiated sound measurements. A comparison is made across vocal fold models to relate the objective measures and the dynamics of the fluid-structure interaction within the glottis.

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Michael Krane
Penn State University

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