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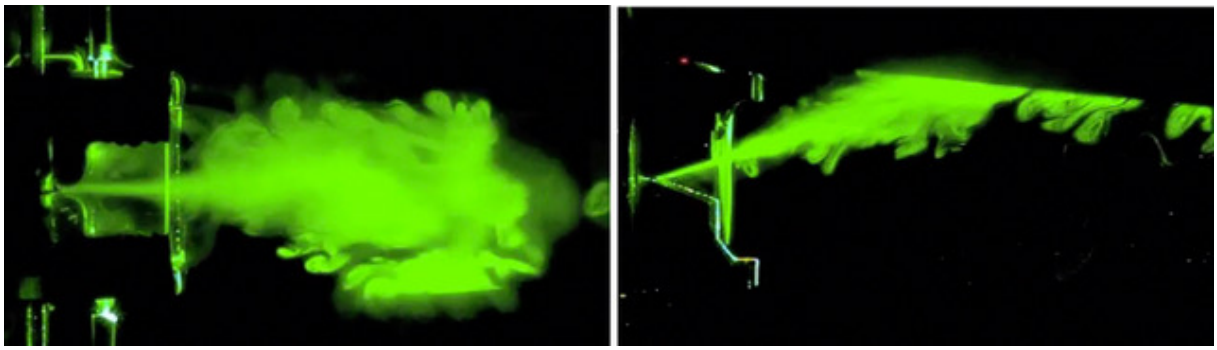
When Air Meets Tissue: Fluid Mechanics of Speech

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Thursday, November 12th (2026), 16:30 Paris Time
LMFL Fluid Mechanics Webinar Link

Abstract

The human upper airways host complex fluid flows in which the interaction between the air, the sound-generating tissues and the surrounding structures plays a central role. These flows, typically at moderate Reynolds numbers, govern key physiological processes - from speech production to the breathing function - and can become pathological in respiratory disorders. This seminar presents an overview of recent work investigating these mechanisms through complementary experimental, theoretical and numerical approaches. The interplay between fluid mechanics, aeroacoustics and fluid-structure interaction is highlighted, with applications to voice production, airflow dynamics and airway pathologies.



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