JET AEROACOUSTICS: SOME INSIGHTS FROM NUMERICAL EXPERIMENTS

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In this talk I plan to discuss the computational and physical modeling issues, which need to be carefully addressed in numerical simulations of turbulent subsonic and supersonic jets, to achieve accurate prediction of the laboratory measurements of the mean flow, turbulence, and near- and far-field sound radiation, see [1] for details. Next, I will discuss how the simulation data can be used to gain some insights into jet aeroacoustics, such as characterizing the dominant noise source mechanisms and their modeling for engineering purposes. I will also emphasize the use of numerical experiments to learn about sound source mechanisms, and end the talk with a discussion of some open issues.

References

1. S. K. Lele and J. W. Nichols. A Second Golden Age of Aeroacoustics ? Phil. Trans. Roy. Soc. A, 2014, **372**, 20130321.