

INLET BOUNDARY CONDITIONS FOR SPATIALLY DEVELOPING LES

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Unsteady CFD (Computational Fluid Dynamics) models of turbulent flow require solution of the three-dimensional Navier-Stokes (NS) and continuity equations, with prescribed boundary conditions on each face of the computational domain. Downstream flow can be particularly sensitive to the inlet boundary condition; it is necessary to provide a realistic, coherent series of time-varying velocity components to avoid (at best) wasteful and inaccurate readjustment behaviour. This seminar will describe a series of modifications to a popular inflow generation approach for spatially developing simulations (e.g. boundary layers), and will present some interesting JICF (jet in cross-flow) test-cases.