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**Roger M. Temam\*** ([temam@indiana.edu](mailto:temam@indiana.edu)), 831 East Third Street, Rawles Hall, Bloomington, IN 47405. *Boundary layers associated with the incompressible Navier-Stokes equations: The non characteristic case.*

In this lecture we will study the behavior for small viscosity of the Navier-Stokes equations in a channel, when the wall are permeable (non characteristic case). Convergence is proved to the Euler equations for the linearized and the nonlinear case, for dimension two and three (for a limited time in the nonlinear case); and the appropriate correctors describing the boundary layers are constructed. The methodology is also reminiscent of the multideck boundary layer theory by Stewartson and others. (Received September 05, 2006)