

Speaker: Jan Brezina

Title: On asymptotic behavior of compressible Navier-Stokes equation around a time-periodic parallel flow

Abstract:

Under appropriate smallness conditions on Reynolds and Mach numbers we show the global in time existence of strong solutions to the compressible Navier-Stokes equation around time-periodic parallel flows in  $R^n$ ,  $n \geq 2$ . Furthermore, we study the asymptotic behavior of these solutions and prove that the cases  $n = 2$  and  $n \geq 3$  are considerably different.