Solution of 2-D Navier-Stokes Equations: Laminar Flat Plate
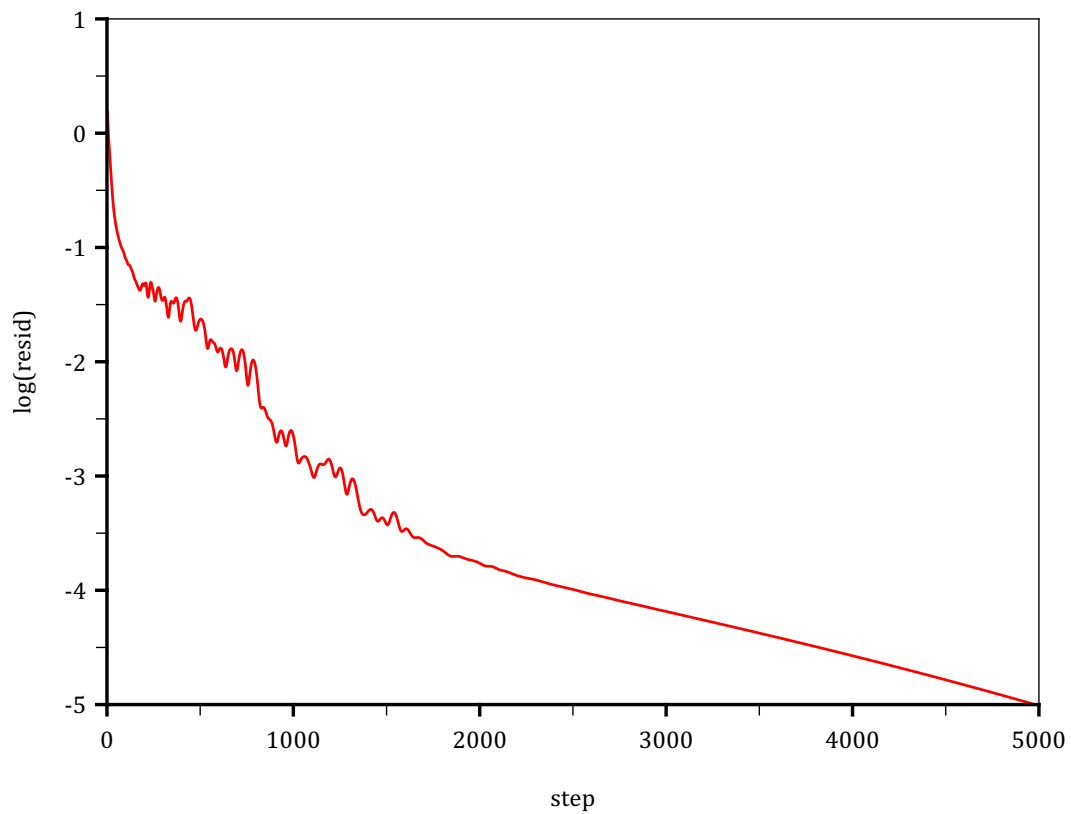
Spatial discretization by Roe's upwind scheme:
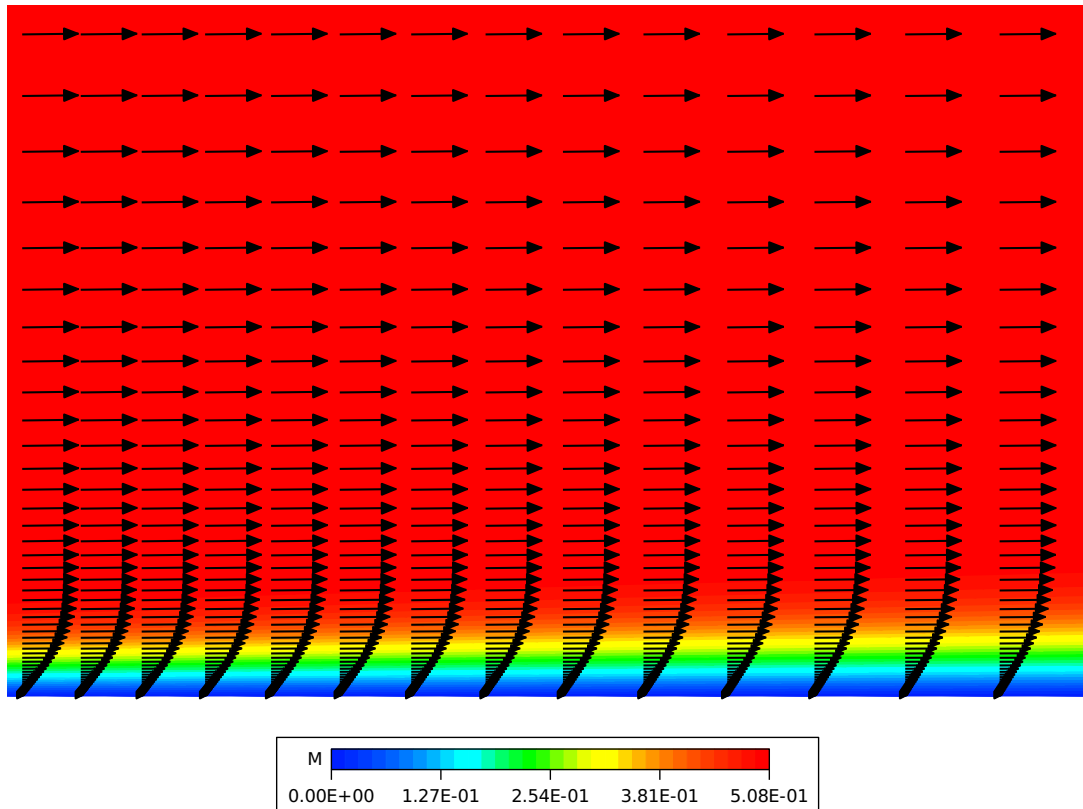$\sigma = 5.0, \varepsilon = 0.6, K = 10$

Boundary conditions:
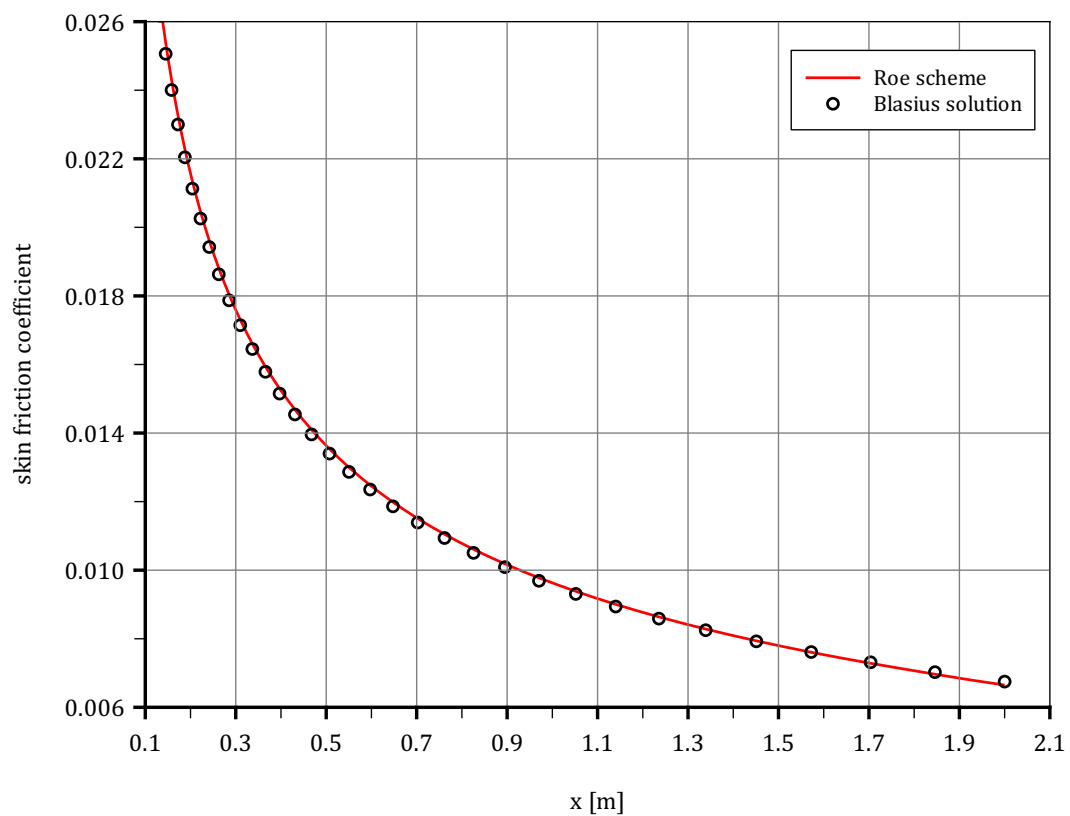$M_\infty = 0.5, p_\infty = 1.0 \cdot 10^5$ Pa, $T_\infty = 288.15$ K, $Re = 5000$.

Convergence history.

Mach number distribution and velocity vectors.

Distribution of the skin friction coefficient along the wall.