

R-013

- Flow solver: FUN3D 14.0 (<https://software.nasa.gov/software/LAR-20188-1>)
- Spatial discretization: 2nd-order, upwind, finite-volume, mixed-element, unstructured-grid
- Time integration or iteration method: Steady state, implicit
- Name of committee grids (or “self-prepared”): 1.R.01, 1.R.05, 2.R.01
- Cases submitted: Case 1; Case 2 (2.1–2.2)
- Initialization method: Free stream conditions
- **Turbulence model:** SA-neg-QCR2000-R (for Case 1), SA-neg (for Cases 1, 2.1, 2.2)
- **Convergence/stopping criteria:** meanflow and turbulence-model residuals reach $< 1E-10$ or F&M averages over last 1000 iterations remain within prescribed tolerance (variations $< 1E-7$)
- Relevant recent publications related to solver and/or high-lift applications: