

R-010 AeroDynamic Solutions

- Flow solver: Code Leo, GPU-Accelerated
- Spatial discretization: Finite volume
- Turbulence model: SA, Wilcox kw98
- Iteration method: explicit time-marching with residual propagation or multigrid convergence acceleration method
- Convergence/stopping criteria: stability of performance parameters (CL, CD, CM)
- Cases submitted: Test Case 1, Test Case 2 (2.1, 2.2, 2.4)
- Grids: Pointwise 1.R.01, HeldenMesh 2.R.01 , Ennova custom
- Relevant publications related to solver and high-lift applications:
 - Ni, R. H., 1982, “A Multiple-Grid Scheme for Solving the Euler Equations”, AIAA 81-1025R
 - Robles Vega, G., Lee, D. Y., Ni, M., Ni, R. H., 2023, “Part I: Validation and Verification of CFD Analysis for NASA SDT Transonic Fan Stage Test Rig”, GT2023-103856
 - Lee, D. Y., Robles Vega, G., Ni, M., Ni, R. H., 2023, “Part II: Validation and Verification of CFD Analysis for NASA SDT Transonic Fan Stage Coupled with Nacelle”, GT2023-103871
 - Ni, M., Ni, R.H. and Clark, J., 2023, “LES Modeling of High-Lift High-Work LP Turbine Profiles: Part I: Approach”, GT2023-102605
 - Kerestes, J., Marks, C., Clark, J., Wolff, M., Ni, R., Fletcher, N., 2023, “LES Modeling of High-Lift High-Work LPT Blades: Part II- Validation and Application”, GT2023-101950