

TurbSim Demonstration: Notes

Downloading the archive:

The NWTTC Design Codes website:

<http://wind.nrel.gov/designcodes/>

Links to TurbSim under both “Preprocessors” and “Simulators”

Direct link to TurbSim on the NWTTC Design Codes website:

<http://wind.nrel.gov/designcodes/preprocessors/turbsim/>

Auxiliary scripts for analyzing TurbSim data:

MATLAB®:

Scripts found in the TurbSim archive’s CertTest folder:

loadFFtxt.m	reads formatted full-field files (<i>RootName.u, .v, .w</i>)
readHHbin.m	reads hub-height binary files (<i>RootName.bin</i>)
readTSgrid.m	reads TurbSim/AeroDyn full-field binary files (<i>RootName.bts</i>)
loadColumnData.m	reads text data in columns (function is called from the other matlab scripts to read formatted data)
Compare*.m	Compares two different files (of the same type) – used in CertTest to compare new files with old ones

Scripts found in a zip file on our website <http://wind.nrel.gov/public/bjonkman/>:

readBLgrid.m	reads binary full-field files in BLADED/AeroDyn form (<i>RootName.wnd</i>)
CalculateReynoldsStress.m	calculates Reynolds stresses from full-field wind files
RotateVelocityComponents.m	rotates wind from inertial frame to reference frame aligned with the mean flow

Fortran 95

Program found on our website: <http://wind.nrel.gov/public/bjonkman/>

CTWind.exe.m	program to merge the coherent structures with the background wind files; code from AeroDyn
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