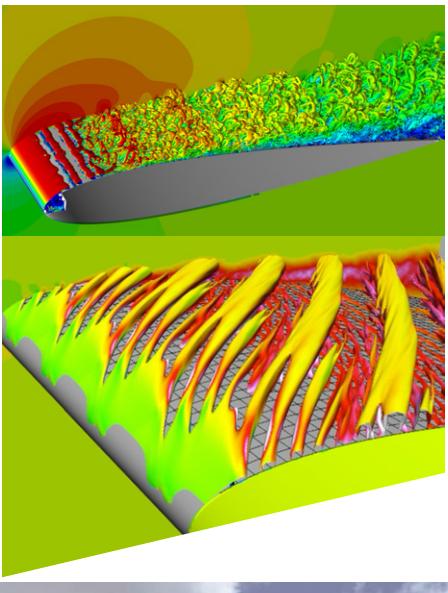
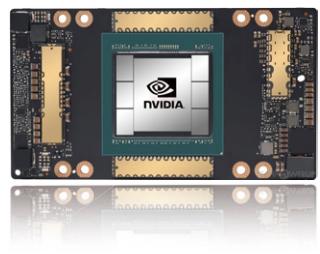


Modern hardwares and high-order CFD

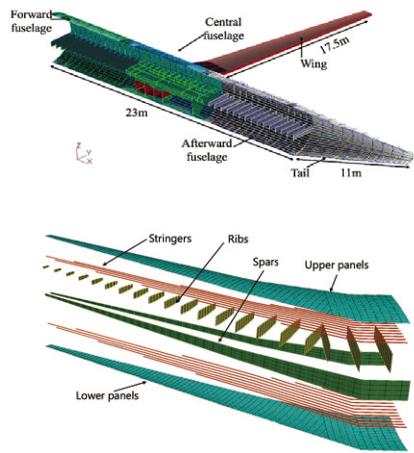


 PyFR



Flow control

Design optimization of aircraft structures



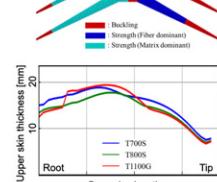
DASH

Digital Aircraft Design tool of Tohoku University

One-way (CFD \rightarrow CSD)

T700S
Lower surface
T800S
Upper surface
T1100G

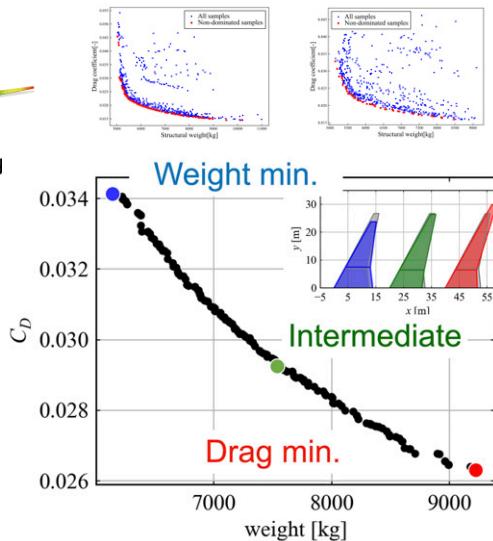
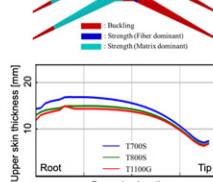
Buckling (Red)
Strength (Blue)
Strength (Matrix dominant) (Green)



Two-way (CFD \rightleftarrows CSD)

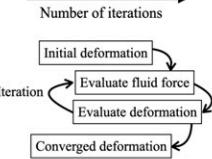
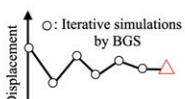
T700S
Lower surface
T800S
Upper surface
T1100G

Buckling (Red)
Strength (Blue)
Strength (Matrix dominant) (Green)



Data-driven multi-physics simulation

► Nonlinear Block Gauss-Seidel (BGS)



► Force-based fully partitioned (FFP)

