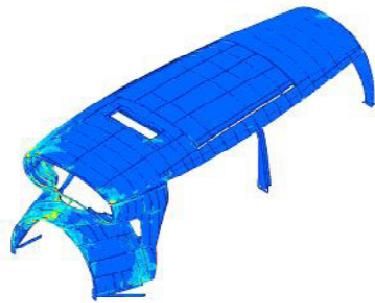
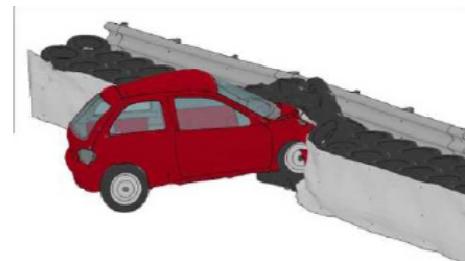


Structural Mechanics

- Linear and non-linear structures
1D, 2D (plane strain, plane stress, axisymmetrical, multi-harmonic), 3D
Bars, beams, shells, volume
Assessments of assembled parts (bolted, riveted, welded)
Optimisation and lifting assessments
Super elements, coupling
- Non-linearities : geometry, material, load, boundary condition
- Material : elastic, composite, viscoelastic, viscoplastic, hyperelastic, isotropic, anisotropic, ...
- Static
- Vibration, stability with or without preload
- Dynamic with or without damping
Implicit
Explicit (crash, impact)
Modal : modal superposition, spectral response / harmonic response, transient response
SPH impact
Fan Blade Out dynamic assessments
- Optimisation, sensibility analysis
- Rotor dynamic assessments
- Mechanisms
- Thermal (heat transfer with boundary conditions)



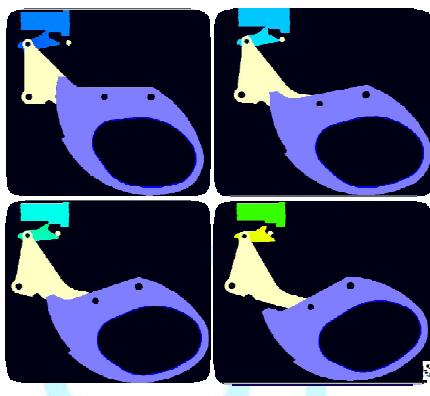
Structural simulation of a test bed



Crash simulation

Couplings

- Multi-physics analysis
Fluids / structures
Thermo mechanics
Poroelastic materials
- Weak and strong coupling
- Multi body analysis



Mechanisms

Software's

ABAQUS, ANSYS, CATIA, NASTRAN, SAMCEF,
Oofelie, Metafor ...
CAST3M, Code_Aster ...
EuroPlexus, LS-Dyna or coupling of codes CFD/CSM