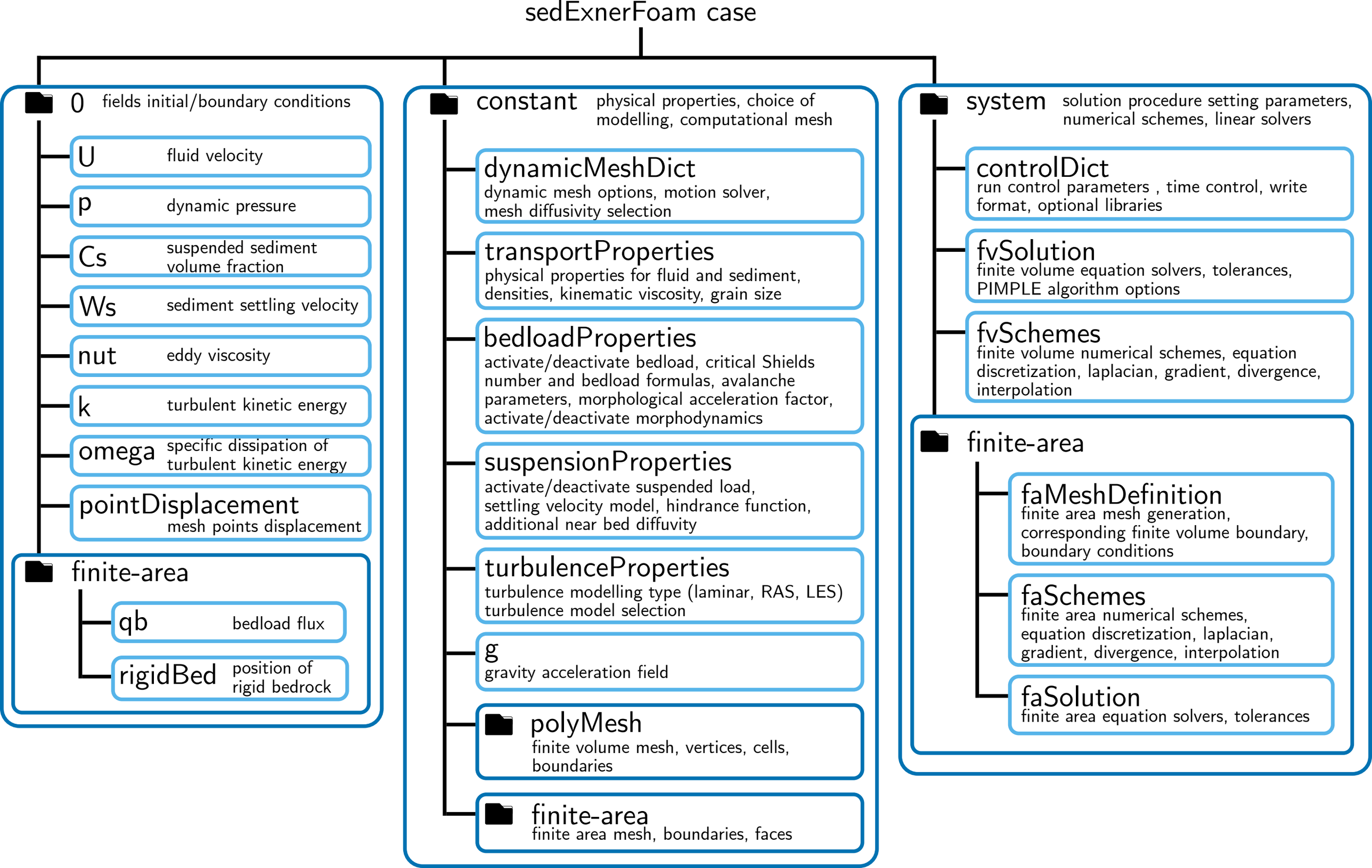
sedExnerFoam case
0
fields initial/boundary conditions
U
fluid velocity
p
dynamic pressure
Cs
suspended sediment volume fraction
Ws
sediment settling velocity
nut
eddy viscosity
k
turbulent kinetic energy
omega
specific dissipation of turbulent kinetic energy
pointDisplacement
mesh points displacement
finite-area
qb
bedload flux
rigidBed
position of rigid bedrock
constant
physical properties, choice of modelling, computational mesh
dynamicMeshDict
dynamic mesh options, motion solver, mesh diffusivity selection
transportProperties
physical properties for fluid and sediment, densities, kinematic viscosity, grain size
bedloadProperties
activate/deactivate bedload, critical Shields number and bedload formulas, avalanche parameters, morphological acceleration factor, activate/deactivate morphodynamics
suspensionProperties
activate/deactivate suspended load, settling velocity model, hindrance function, additional near bed diffuvity
turbulenceProperties
turbulence modelling type (laminar, RAS, LES) turbulence model selection
g
gravity acceleration field
polyMesh
finite volume mesh, vertices, cells, boundaries
finite-area
finite area mesh, boundaries, faces
system
solution procedure setting parameters, numerical schemes, linear solvers
controlDict
run control parameters , time control, write format, optional libraries
fvSolution
finite volume equation solvers, tolerances, PIMPLE algorithm options
fvSchemes
finite volume numerical schemes, equation discretization, laplacian, gradient, divergence, interpolation
finite-area
faMeshDefinition
finite area mesh generation, corresponding finite volume boundary, boundary conditions
faSchemes
finite area numerical schemes, equation discretization, laplacian, gradient, divergence, interpolation
faSolution
finite area equation solvers, tolerances