UML Class Diagram

AGtriangulation
- Properties
  - agNodes_global
  - el_table
  - inds_r
  - misc
  - msh_ag
  - n_bnd
  - n_moving
  - original_positions
  - p_virt
  - shiftTol
  - S_const
  - t_const
  - t_moving
- Methods
  - AGtriangulation
  - get_AGmatrix
  - setConstantAGmatrix
  - setEccentricity
  - tag_solution
  - t_ag
  - update

<<Enumeration>> BasisTypes
- Values
  - linear2
  - bilinear2
  - quadratic2
  - cubic2
  - linear3
  - bilinear3
- Methods
  - BasisTypes

defs
- Methods
  - asynchronous
  - cage
  - current_supply
  - current_supply_dynamic
  - decomposed
  - defs
  - delta
  - none
  - solid_fr
  - star
  - stranded
  - synchronous
  - timeharmonic
  - timestepping
  - user_defined

Elements
- Methods
  - composite
  - Elements
  - isoparametric
  - isPrism
  - isTet
  - isTriangle
  - prism
  - refPoints_edges
  - refPoints_nodes
  - tet
  - triangle
  - triangle2
  - triangle2i

gwrap
- Properties
  - gpath
  - holesInSurfaces
  - l
  - lc
  - ll
  - N_lineloops
  - N_lines
  - N_points
  - N_surfaces
  - p
  - physicalLines
  - surfaces
- Methods
  - addLineloop
  - addLinePoints
  - addLines
  - addpcw
  - addPows
  - addPoints
  - addSurface
  - fillSurface
  - gwrap
  - loadMesh
  - mesh
  - plotSurface
  - removeDuplicates
  - writeFile

IDfun
- Properties
  - k
- Methods
  - eval
  - getData
  - getIndices
  - IDfun

MachineSimulation
- Properties
  - dims
  - matrices
  - misc
  - msh
  - Ne
  - Np
  - nu_fun
  - nu_struct
  - results
- Methods
  - fluxplot
  - init
  - ls
  - lsh
  - MachineSimulation
  - run_harmonic
  - run_static
  - run_timestepping
  - setBoundaryMatrix
  - setLoadVector
  - setRotorCircuitMatrices
  - setStatorCircuitMatrices

MatrixConstructor...
- Properties
  - E
  - I
  - J
  - Ncols
  - Ncoord
  - Nrows
  - Nvals
- Methods
  - addCoordinates
  - addIndices
  - addValues
  - finalize
  - MatrixConstructorBase
  - resetCoordinates
  - resetValues

...Constructor
- Properties
  - DETF
  - dof_shape
  - Fvals_shape
  - Fvals_test
  - free
  - msh
  - Ne
  - symmetric
  - w
  - x_quad
- Methods
  - eval
  - eval_complex
  - JacobianConstructor

MatrixConstructor
- Properties
  - determinant
  - funvals_shape
  - funvals_test
- Methods
  - assemble_matrix
  - assemble_vector
  - assemble_with_fun
  - MatrixConstructor

MeshBase
- Properties
  - e2t
  - edges
  - elementType
  - info
  - matel
  - misc
- Methods
  - copy
  - getMappingMatrix
  - MeshBase
  - setDirichletNodes
  - split_edges

MeshBase3D
- Properties
  - edges
  - elements
  - elements2edges
  - elements2faces
  - elementType
  - faces
  - faces2elements
  - info
  - namedElements
  - namedFaces
  - namedNodes
  - nodes
- Methods
  - copy
  - getMappingMatrix
  - MeshBase3D

Nedelec2D
- Properties
  - op
- Methods
  - eval
  - eval_ref
  - getData
  - getIndices
  - Nedelec2D

Nedelec3D
- Properties
  - op
- Methods
  - eval
  - eval_ref
  - getData
  - getIndices
  - Nedelec3D

Nedelec3DPrism
- Properties
  - op
- Methods
  - eval2
  - eval_ref
  - getData
  - getIndices
  - Nedelec3DPrism

NedelecShapeFun...
- Methods
  - evaluate
  - NedelecShapeFunction
  - PrismCoefficients

Nedelec_Prism
- Methods
  - getCoefficients
  - Nedelec_Prism

Nodal2D
- Properties
  - op
- Methods
  - eval
  - eval_nf
  - getData
  - getIndices
  - Nodal2D

Operators
- Methods
  - curl
  - div
  - grad
  - l
  - Operators

PolynomialBasis3D
- Properties
  - basisType
  - xorder
  - yorder
  - zorder
- Methods
  - bieval
  - curl_coeffs
  - derivated_coeffs
  - eseval
  - eval
  - getBasisType
  - getOrders
  - getOrdersFromBT
  - PolynomialBasis3D

<<Enumeration>> ShapeFunctions
- Values
  - nedelec
  - nedelec_all
  - nodal_all
- Methods
  - evaluate
  - getBassData
  - getCoefficients
  - getSuperClass
  - ShapeFunctions

SimpleMesh
- Properties
  - elementType
  - nodal
  - matel
- Methods
  - getMappingMatrix
  - SimpleMesh

SimpleTetMesh
- Properties
  - e
  - elementType
  - p
  - t
  - t2e
- Methods
  - elementCenters
  - getMappingMatrix
  - SimpleTetMesh

SimulationParamet...
- Properties
  - alpha2
  - dispfun
  - f
  - fs
  - ls
  - master
  - misc
  - N_periods
  - N_stepsPerPeriod
  - phi0
  - rotorAngle
  - rotorDisplacement
  - silent
  - slip
  - U
  - Ubus
  - waveform
- Methods
  - dispf
  - miscpar
  - SimulationParameters
  - ts

SLContainer
- Properties
  - data
- Methods
  - add
  - copy
  - get
  - keys
  - set
  - SLContainer

SurfaceLineMesh
- Properties
  - p
- Methods
  - getMappingMatrix
  - patch
  - quadpoints
  - SurfaceLineMesh

SurfaceMesh
- Properties
  - p
- Methods
  - getMappingMatrix
  - patch
  - quadpoints
  - SurfaceMesh

ThreePhaseControl...
- Properties
  - alpha
  - angle_bias
  - efit
  - fs
  - I
  - Icorr
  - Iref
  - Is
  - Isl
  - Ixp
  - L
  - R
  - Ra
  - ri
  - Tp
  - Tqlinv
  - tprev
  - Ubus
  - Uis
  - w
- Methods
  - Istepdps
  - ThreePhaseController
  - U
  - Upwm

PrismMeshBase3D
- Methods
  - PrismMeshBase3D

MachineMesh
- Properties
  - bandData
  - periodicityCoeff
  - symmetrySectors
- Methods
  - copy
  - generateMovingBand
  - get_AGmatrix
  - isfield
  - MachineMesh
  - rotel
  - setMachineBoundaryNodes
  - setMachineDirichletNodes
  - setMachinePeriodicNodes
  - setMovingBand
  - setSymmetrySectors
  - statel
  - to2ndOrder

ExtrudedPrismMesh
- Properties
  - faces_square
  - faces_tri
  - Ne2
  - Nfaces_square
  - Nfaces_tri
  - NI
- Methods
  - Bguiver
  - elementCenters
  - ExtrudedPrismMesh
  - extrudeElements
  - getMappingMatrix
  - t
  - triplot

ExtrudedMachine...
- Methods
  - ExtrudedMachineMesh