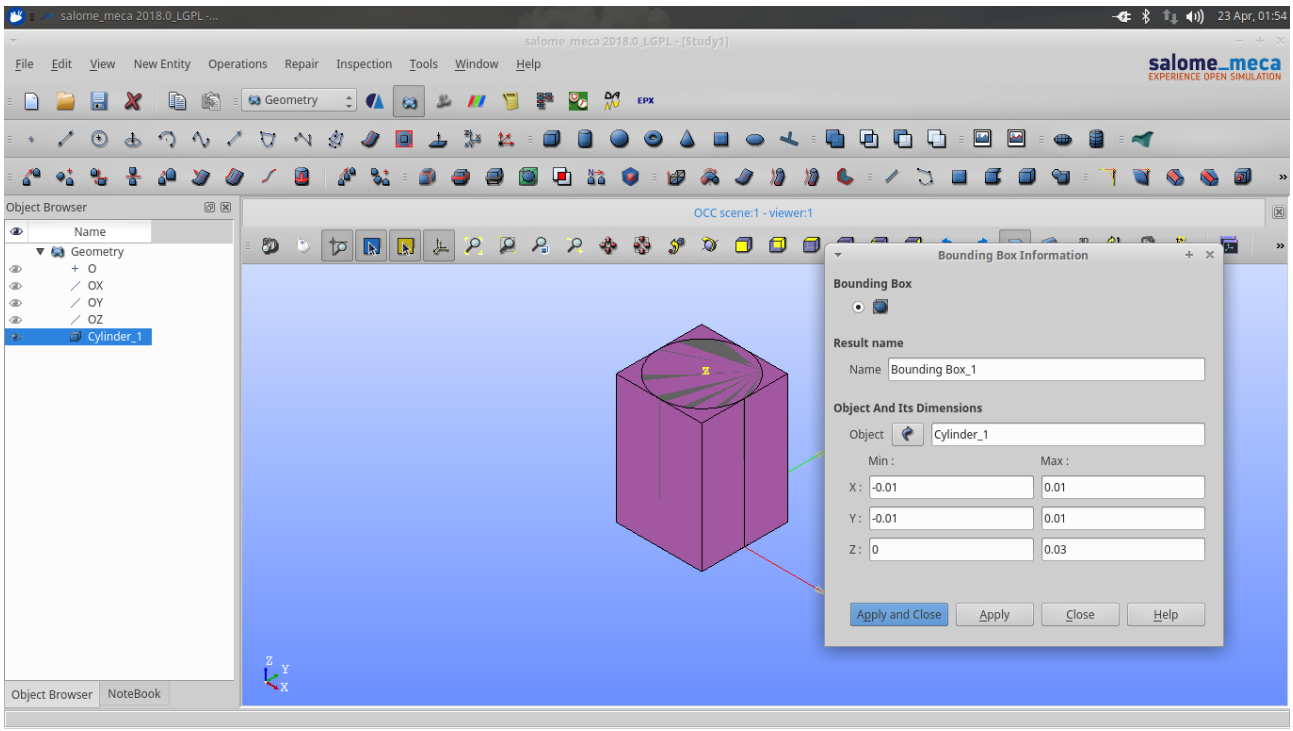
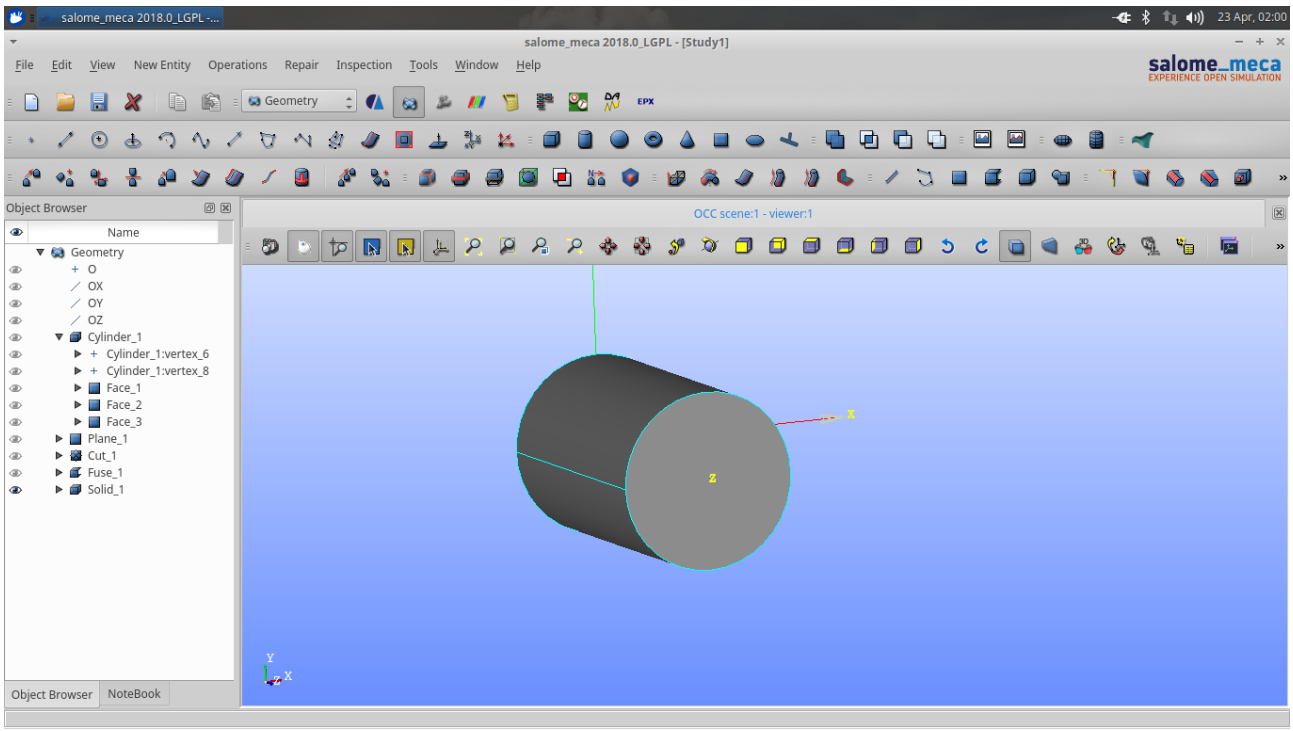
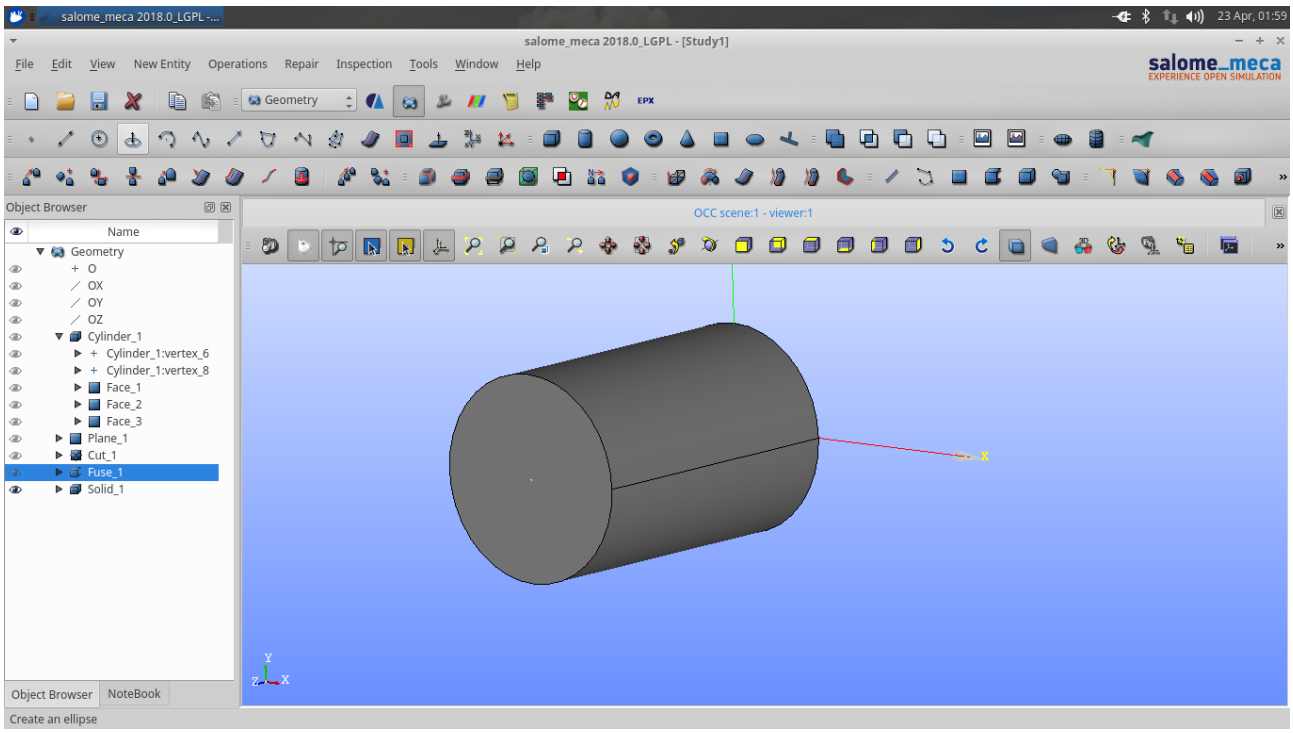
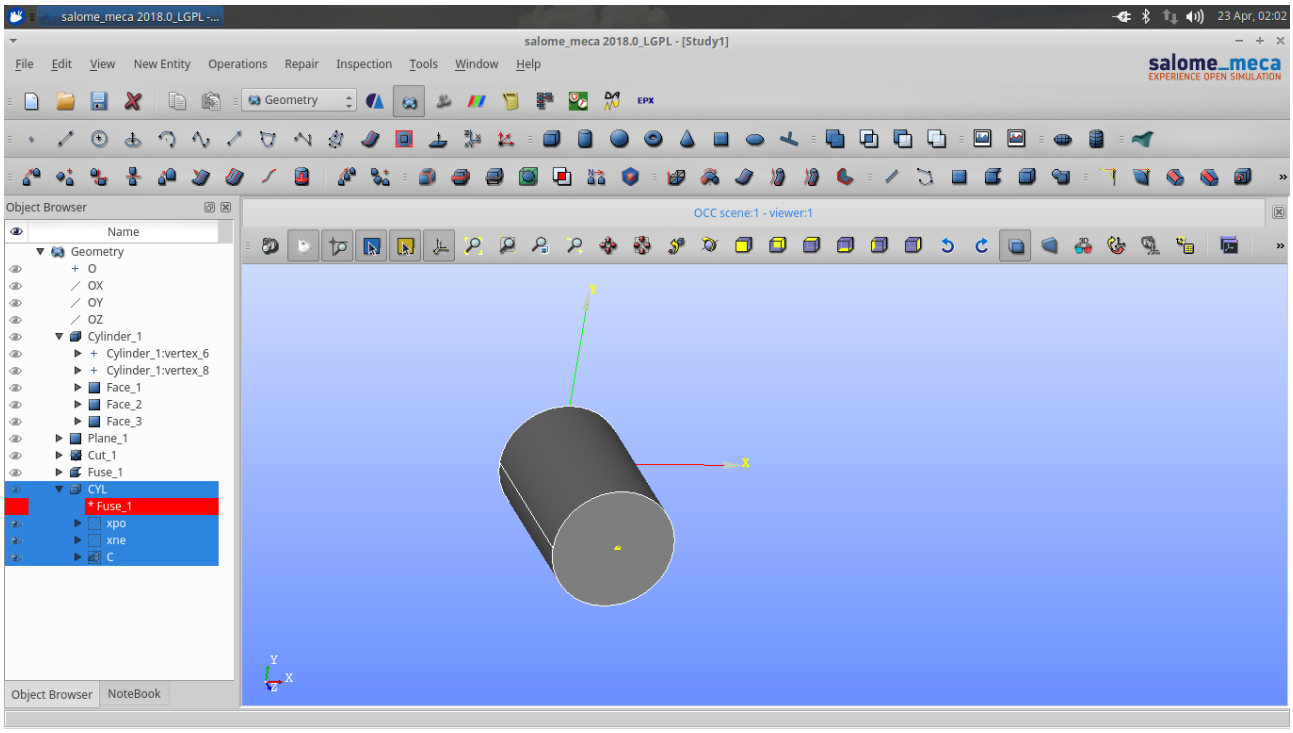
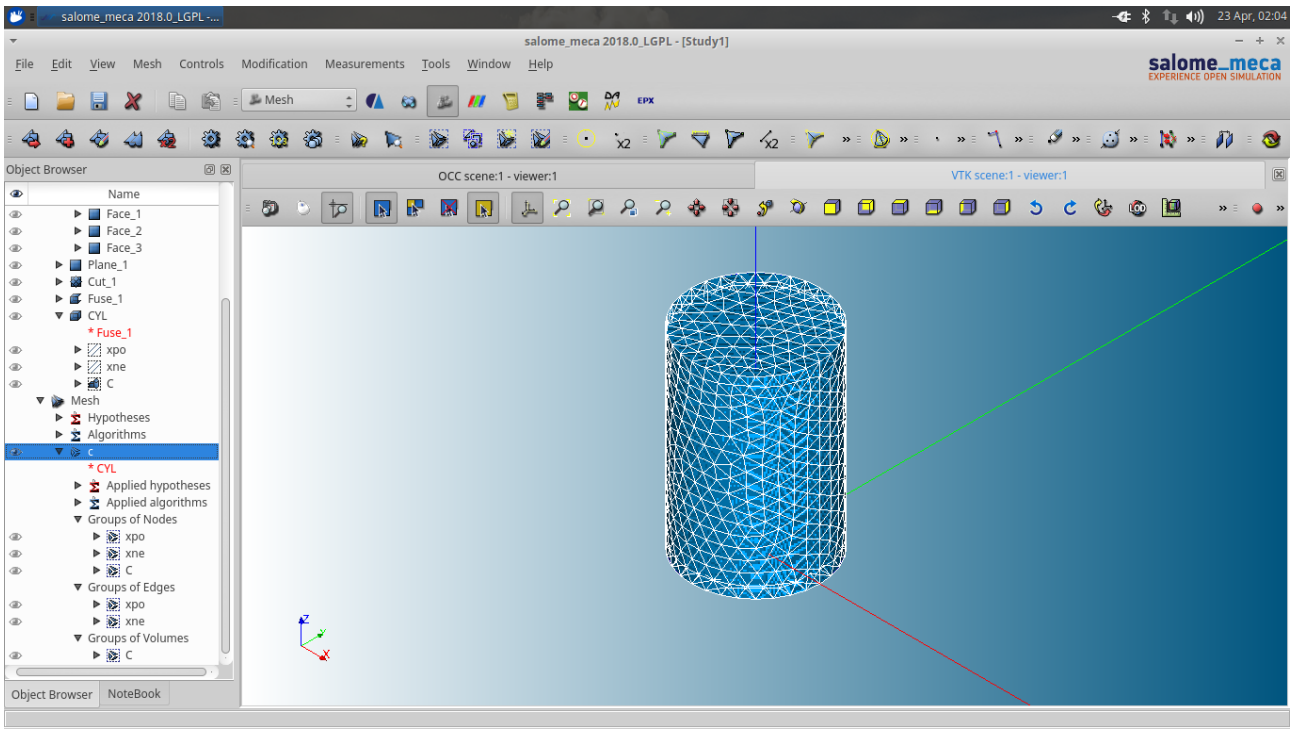

salome_meca 2018.0_LGPL -...
23 Apr, 01:54
salome_meca 2018.0_LGPL - [Study1]
File Edit View New Entity Operations Repair Inspection Tools Window Help
salome_meca
EXPERIENCE OPEN SIMULATION
Geometry
Object Browser
Name
Geometry
O
OX
OY
OZ
Cylinder_1
OCC scene:1 - viewer:1
Bounding Box Information
Bounding Box
Result name
Name Bounding Box_1
Object And Its Dimensions
Object Cylinder_1
Min :
Max :
X : -0.01 0.01
Y : -0.01 0.01
Z : 0 0.03
Apply and Close
Apply
Close
Help
Object Browser
NoteBook


salome_meca 2018.0_LGPL -...
23 Apr, 02:00
salome_meca 2018.0_LGPL - [Study1]
File Edit View New Entity Operations Repair Inspection Tools Window Help
salome_meca
EXPERIENCE OPEN SIMULATION
Geometry
Object Browser
Name
Geometry
O
OX
OY
OZ
Cylinder_1
Cylinder_1:vertex_6
Cylinder_1:vertex_8
Face_1
Face_2
Face_3
Plane_1
Cut_1
Fuse_1
Solid_1
OCC scene:1 - viewer:1
Object Browser
NoteBook


salome_meca 2018.0_LGPL -...
23 Apr, 01:59
salome_meca 2018.0_LGPL - [Study1]
File Edit View New Entity Operations Repair Inspection Tools Window Help
salome_meca
EXPERIENCE OPEN SIMULATION
Geometry
Object Browser
Name
Geometry
O
OX
OY
OZ
Cylinder_1
Cylinder_1:vertex_6
Cylinder_1:vertex_8
Face_1
Face_2
Face_3
Plane_1
Cut_1
Fuse_1
Solid_1
OCC scene:1 - viewer:1
Object Browser
NoteBook
Create an ellipse


salome_meca 2018.0_LGPL -...
23 Apr, 02:02
salome_meca 2018.0_LGPL - [Study1]
File Edit View New Entity Operations Repair Inspection Tools Window Help
salome_meca
EXPERIENCE OPEN SIMULATION
Geometry
Object Browser
Name
Geometry
O
OX
OY
OZ
Cylinder_1
Cylinder_1:vertex_6
Cylinder_1:vertex_8
Face_1
Face_2
Face_3
Plane_1
Cut_1
Fuse_1
CYL
Fuse_1
xpo
xne
C
OCC scene:1 - viewer:1
Object Browser
NoteBook




```
DEBUT(LANG='EN')


mesh = LIRE_MAILLAGE(identifier=u'0:1',
                     FORMAT='MED',
                     UNITE=20)

mesh = MODI_MAILLAGE(identifier=u'1:1',
                     reuse=mesh,
                     MAILLAGE=mesh,
                     ORIE_PEAU_3D=_F(GROUP_MA=('xne', 'xpo'),
                                     GROUP_MA_VOLU=('C', )))

model = AFFE_MODELE(identifier=u'2:1',
                    AFFE=_F(MODELISATION=('3D', ),
                            PHENOMENE='MECANIQUE',
                            TOUT='OUI'),
                    MAILLAGE=mesh)

ys = DEFI_CONSTANTE(identifier=u'3:1',
                    VALE=2.1e+11)

ps = DEFI_CONSTANTE(identifier=u'4:1',
                    VALE=0.285)

ds = DEFI_CONSTANTE(identifier=u'5:1',
                    VALE=8000.0)
```

```
steel = DEFI_MATERIAU(identifier=u'6:1',
                      ECRO_LINE=_F(D_SIGM_EPSI=1100000000.0,
                                   SY=700000000.0),
                      ELAS_FO=_F(E=ys,
                                 NU=ps,
                                 RHO=ds))

fieldmat = AFFE_MATERIAU(identifier=u'7:1',
                         AFFE=_F(MATER=(steel, ),
                                 TOUT='OUI'),
                         MODELE=model)

times = DEFI_LIST_INST(identifier=u'8:1',
                       DEFI_LIST=_F(VALE=(0.0, 0.001, 0.002, 0.003, 0.004, 0.005, 0.006, 0.007, 0.008,
0.009, 0.01, 0.011, 0.012, 0.013, 0.014, 0.015, 0.016, 0.017, 0.018, 0.019, 0.02, 0.021, 0.022, 0.023,
0.024, 0.025, 0.026, 0.027, 0.028, 0.029, 0.03, 0.031, 0.032, 0.033, 0.034, 0.035, 0.036, 0.037,
0.038, 0.039, 0.04, 0.041, 0.042, 0.043, 0.044, 0.045, 0.046, 0.047, 0.048, 0.049, 0.05, 0.051, 0.052,
0.053, 0.054, 0.055, 0.056, 0.057, 0.058, 0.059, 0.06, 0.061, 0.062, 0.063, 0.064, 0.065, 0.066,
0.067, 0.068, 0.069, 0.07, 0.071, 0.072, 0.073, 0.074, 0.075, 0.076, 0.077, 0.078, 0.079, 0.08, 0.081,
0.082, 0.083, 0.084, 0.085, 0.086, 0.087, 0.088, 0.089, 0.09, 0.091, 0.092, 0.093, 0.094, 0.095,
0.096, 0.097, 0.098, 0.099, 0.1)))

xpo = FORMULE(identifier=u'9:1',
              NOM_PARA=('INST', ),
              VALE='0.01*cos(10*INST)-0.01')

ypo = FORMULE(identifier=u'10:1',
              NOM_PARA=('INST', ),
              VALE='0.01*sin(10*INST)')

xne = FORMULE(identifier=u'11:1',
              NOM_PARA=('INST', ),
              VALE='0.01*cos(10*INST+pi)+0.01')

yne = FORMULE(identifier=u'12:1',
              NOM_PARA=('INST', ),
              VALE='0.01*sin(10*INST+pi)')

load = AFFE_CHAR_MECA_F(identifier=u'13:1',
                        DDL_IMPO=(_F(DX=xpo,
                                     DY=ypo,
                                     GROUP_NO=('xpo', )),
                                  _F(DX=xne,
                                     DY=yne,
                                     GROUP_NO=('xne', ))),
                        MODELE=model)

resnonl = DYNA_NON_LINE(identifier=u'14:1',
                        CHAM_MATER=fieldmat,
                        COMPORTEMENT=_F(DEFORMATION='SIMO_MIEHE',
                                        RELATION='VMIS_ISOT_LINE'),
```

```
                CONVERGENCE=_F(ITER_GLOB_MAXI=30),
                EXCIT=_F(CHARGE=load),
                INCREMENT=_F(LIST_INST=times),
                METHODE='NEWTON',
                MODELE=model,
                NEWTON=_F(MATRICE='TANGENTE',
                      PREDICTION='TANGENTE'),
                SCHEMA_TEMPS=_F(FORMULATION='DEPLACEMENT',
                           SCHEMA='HHT'),
                SOLVEUR=_F(METHODE='MUMPS'))

resnonl = CALC_CHAMP(identifier=u'15:1',
                reuse=resnonl,
                CONTRAINTE=('SIGM_ELGA', 'SIGM_NOEU'),
                RESULTAT=resnonl)

IMPR_RESU(identifier=u'16:1',
      FORMAT='MED',
      RESU=_F(RESULTAT=resnonl),
      UNITE=80)

FIN()
```