

How to set and control
GRIT parameters in cfg
files

A typical cfg-file example

Step 1: First specify what operations to use

```
operations = vertex_split move merge coarsening interface_coarsening refinement interface_refinement smoothing interface_smoothing optimization
```

```
import params_vertex_split      = remeshing_params/vertex_split.cfg
import params_move              = remeshing_params/move.cfg
import params_merge             = remeshing_params/merge.cfg
import params_coarsening        = remeshing_params/coarsening.cfg
import params_interface_coarsening = remeshing_params/interface_coarsening.cfg
import params_refinement        = remeshing_params/refinement.cfg
import params_interface_refinement = remeshing_params/interface_refinement.cfg
import params_smoothing         = remeshing_params/smoothing.cfg          # Laplacian smoothing of non-interface vertices
import params_interface_smoothing = remeshing_params/interface_smoothing.cfg
import params_optimization       = remeshing_params/optimization.cfg      # edge flip optimization
```

Step 2: Create some namespaces from other cfg-files

```
#syntax: assign = operation_nameX label_valueY scope_name;
```

```
assign = vertex_split      0 vertex_split
assign = vertex_split      1 vertex_split

assign = move              1 params_move

assign = merge             0 params_merge
assign = merge             1 params_merge

assign = coarsening        0 params_coarsening
assign = coarsening        1 params_coarsening

assign = interface_coarsening 0 params_interface_coarsening
assign = interface_coarsening 1 params_interface_coarsening

assign = refinement        0 params_refinement
assign = refinement        1 params_refinement

assign = interface_refinement 0 params_interface_refinement
assign = interface_refinement 1 params_interface_refinement

assign = smoothing         0 params_smoothing
assign = smoothing         1 params_smoothing

assign = interface_smoothing 0 params_interface_smoothing
assign = interface_smoothing 1 params_interface_smoothing

assign = optimization      0 params_optimization
assign = optimization      1 params_optimization
```

```
#syntax: override = operation_nameX label_valueY parameter_nameX parameter_valueY
```

```
override = interface_refinement 0 max_iterations 0          # Turn off interface refinement for ambient space
override = interface_coarsening 0 max_iterations 0          # Turn off interface coarsening for ambient space

override = interface_refinement 1 lower_threshold 0.04
override = interface_coarsening 1 upper_threshold 0.001

override = refinement          1 lower_threshold 0.05
override = coarsening          1 upper_threshold 0.001

override = refinement          0 lower_threshold 0.08
override = coarsening          0 upper_threshold 0.02

override = merge               0 angle_threshold 175.0
override = merge               1 angle_threshold 175.0

override = move                0 strength 0.99
override = move                1 strength 0.99
```

Step 3: Assign values from namespaces to operations when working on specific phases

Step 4: Override assigned values to customise behaviour