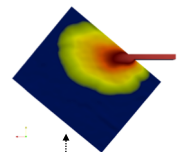


# libMesh-sedimentation workflow



## libMesh-sedimentation source code instrumentation

```
...  
...  
...  
for (unsigned int t_step = init_tstep;  
     (t_step < n_time_steps) && (time < tmax);  
     t_step++) {  
    parameters = reload_parameters();  
    provenance.initTimeIteration();  
    ...  
    for (unsigned int nonlinear_step = 0;  
         nonlinear_step < max_nonlinear_steps;  
         ++nonlinear_step) {  
        ...  
        provenance.initFluidSolver();  
        flow_system.solve();  
        provenance.finalizeFluidSolver();  
        ...  
    }  
    ...  
    provenance.finalizeTimeIteration();  
}
```

online  
parameter tuning

online  
data analyses

