

# Elastodynamics Tutorials

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## Parallel 2D

Single dirichlet condition (clamped end bar) and traction loading

```
PSD_PreProcess -dimension 2 -problem elastodynamics -dirichletconditions 1 \  
-tractionconditions 1 -timediscretization newmark-beta
```

```
PSD_Solve Main.edp -mesh ../../Meshes/2D/bar-dynamic.msh -v 0
```

## Parallel 3D

Single dirichlet condition (clamped end bar) and traction loading

```
PSD_PreProcess -dimension 3 -problem elastodynamics -dirichletconditions 1 \  
-tractionconditions 1 -timediscretization newmark-beta
```

```
PSD_Solve Main.edp -mesh ../../Meshes/3D/bar-dynamic.msh -v 0
```

- Optionally try using `-fastmethod` flag with `PSD_PreProcess` optimized solver
- Optionally try using `-timediscretization generalized-alpha` instead of `-timediscretization newmark-beta` to change time discretization scheme
- Add `-sequential` flag to `PSD_PreProcess` for sequential solver, but remember to use `PSD_Solve_Seq` instead of `PSD_Solve`