

We present data set which includes raw data, post-processed data, and python script files used in article:

(Jha and Lipton 2019) P.K. Jha and R. Lipton. *Numerical convergence of finite difference approximations for state based peridynamic fracture models*. **Computer Methods in Applied Mechanics and Engineering**, 2019. <https://doi.org/10.1016/j.cma.2019.03.024>

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Remarks

1. All the results were obtained using an in-house developed code. At this point, we are not able to share the code with public. However, in future we plan on making the code open source. In the code we have implemented the finite difference approximation together with the central difference scheme for the second order time derivative. The boundary conditions and other technical details are provided in [Section 6, **Jha and Lipton 2019**].
2. For the bending problem (*Example 2*), only those results are provided which are used in producing the damage profile in [Figure 9, **Jha and Lipton 2019**]. The total size of files is about 10 GB and therefore we have only provided important files. To compute the fracture energy, we have provided a .csv file which was obtained from the simulation results.
3. For *Example 1*, we have shared complete results.
4. We provide input file and mesh file for each simulation.
5. In all of the results, the files of type *output_1.vtu*, *output_2.vtu* are files which contain displacement and damage data. The files of type *output_scaled_1.vtu*, *output_scaled_2.vtu* are postprocessed files which contain displacement which was scaled by factor 100 for better plots of damage.
6. Files with .vtu can be visualized using softwares *Visit* and *Paraview*.
7. For *Example 1*, one can use our results to compute the L^2 norm of the difference in the displacement for two mesh sizes, and then compute the rate of convergence given by the formula in [Equation (106) , **Jha and Lipton 2019**].
8. Movies of the simulation can be found in the *postprocessing* folder of each example.
9. Damage plots, rate of convergence, fracture energy, and simulation movies can be found in *postprocessing* folder within *Example_1_Vertical_crack_propagation* and *Example_2_Bending_test_with_crack*.