

# *Developing multiscale modeling scheme using peridynamics and molecular dynamics*

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## A. Goals:

- Develop a seamless atomistic/continuum coupling algorithm.
- Apply the algorithm for multiscale modeling of polyethylene under large deformation.

## B. Brief Description:

Apply peridynamics for modeling continuum scale problem. Use a hybrid hierarchical multiscale modeling scheme to link the continuum model to atomistic model .

## C. Heights of Achievements this semester (using bullets):

- An algorithm was develop to coarsen the atomistic scale model.
- The constitutive model at each scale is updated based on atomistic damage evolution .

