

Example 4: Simulation of Fragmentation

Objective: Observe the multiple cracks initiation and propagation in brittle material.

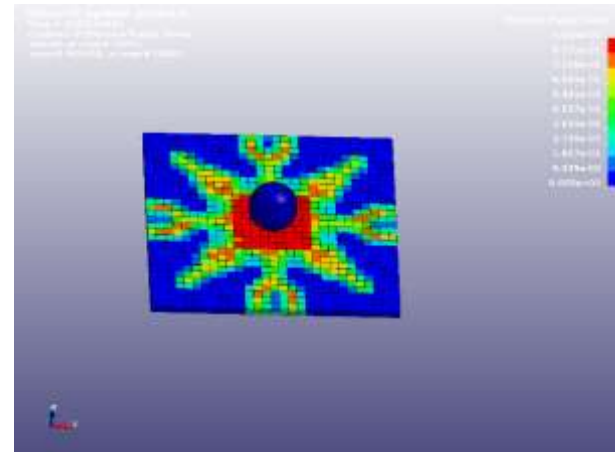
Filename: *ex3glassimpact.k*

Description:

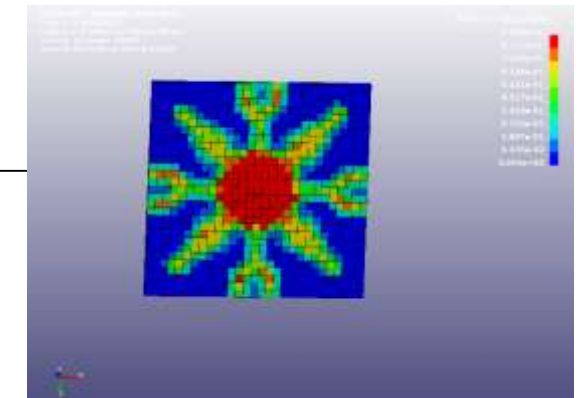
A glass plate is impacted by a rigid ball. Complex damage patterns are formed in the plate automatically.

You are expected to do the following studies by *beta version of executable* :

1. .Copy *ex3glassimpact.k* to directory example3.
2. Obtain the results.
3. In ls-prepost, click **Fringe Component** -> **effective plastic strain**. Here the effective plastic strain indicates the damage value in peridynamics. Play the animation.
4. Change G in MAT_ELASTIC_Peri to 4.0 or 16.0. In messag file, find the max. peri critical bond stretch and min. peri critical bond stretch. And compare the final damage pattern.



Damage pattern, top view



Damage pattern, bottom view