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Continuum Mechanics
Class 21 Highlights

On Wednesday we continued looking at finite strain and started discussing infinitesimal strain. We talked about why or when we would take infinitesimal strain measurements such as when measuring strain from earthquake waves. We talked about the Lagrangian measure of strain and it's symmetry. We determined that it is symmetric, as well as the green's deformation tensor, Eulerian strain tensor, and Cauchy deformation tensor. This is something we would expect because it is based on the stress tensor which is also symmetric.

Then we looked at the equations of strain in terms of displacement. We ended with discussing that in the 1-D sense, the logarithmic approach to determining strain, such as change in length over initial length, is very similar to the Eulerian strain equation.