Class 07 Highlights
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ESS 411 Continuum Mechanics

In class 07, we continued discussing the mathematical tools used in describing tensors. We began by discussing geometrical interpretations of vector operations, namely that the cross product represents the area of the parallelogram created by the two vectors and the triple scalar product is the volume of the parallelepiped created by all three vectors. We then dove into a discussion of linear transformations, specifically between coordinate systems. Changing coordinate systems does not rotate, translate, stretch, or change the orientation of vector itself in any way, just expresses it in a different coordinate system. The basis vectors of the coordinate system have to be orthogonal. We then worked through two transformation of basis examples.