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***Membrane Tearing***

The objective of this project is to continue the study of tearing in membranes. The objective of previous work was to study the damage mechanics in biological tissue with an emphasis on suture, staple, and adhesive behavior. We plan now to continue with similar work and investigate the effect of initial cut orientation on the tear propagation evolution, particularly on the tear propagation direction. Because the level of complexity is considerably greater now than for the previous work, we will commence with the investigation using thin polymer (Kapton, Mylar) membranes. Biological membranes will be returned to in a later phase of work. The hypothesis to be tested is that the cut geometry (cut length and orientation) will affect the tear propagation evolution, as will the presence of wrinkling.