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Research Area: Computer Science and Mathematics

This project will investigate fiber rupture processes in global and local load sharing models. Load previously carried by a failed fiber in a global load-sharing model is shared equally by surviving fibers in the system. In a local load-sharing model, the load originally carried out by a failed fiber is shared by the nearest-neighbors of the ruptured fiber. The research proposes to develop a Worm-Like Chain (WLC) model that allows simulation of fracture and damage evolution in polymers and biomaterials.

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