

Abstract Submitted
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Tear Movement through a Contact Lens of Variable Thickness

MATTHEW GERHART, DANIEL ANDERSON, George Mason University — This work is on a two-dimensional tear film with a movable porous contact lens. The inclusion of a contact lens into a tear film results in three layers: Pre-Lens Tear Film, Contact Lens, and the Post-Lens Tear Film layers. The interfaces between the contact lens and the tear films are modeled as planar interfaces. There is a free surface interface between the tear film and the outside air. The goal is analyze the effects of the spatial variability of thickness on the Post-Lens Tear Film thickness and on the fluid flow through the Contact Lens layer.

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