1141-76-283 **R J Braun*** (rjbraun@udel.edu), Dept of Mathematical Sciences, University of Delaware, Newark, DE 19716, **Lan Zhong** (lanzhong@udel.edu), Dept of Mathematical Sciences, University of Delaware, Newark, DE 19716, **T A Driscoll** (driscoll@udel.edu), Department of Mathematical Sciences, University of Delaware, Newark, DE 19716, **C G Begley** (cbegley@indiana.edu), Indiana University School of Optometry, 800 E. Atwater Avenue, Bloomington, IN 47405, and **P E King-Smith** (king-smith.1@osu.edu), College of Optometry, The Ohio State University, 338 W 10th Ave Room 558, Columbus, OH 43210. *Models for Tear Film Breakup (TBU).*

This talk is about mathematical models for what happens to the thin layer of liquid, the tear film, that forms on the front of the eye as a result of a blink. The tear film is important for ocular surface health, but it can fail in localized areas of TBU. The conditions in TBU are thought to be quite adverse for the ocular surface but they cannot be measured with current technology. We discuss mathematical models and computational approaches for computing the conditions in two different types of TBU. The conditions in the two kinds of TBU are quite different, contrary to what many believe in the ophthalmic and optometric communities. (Received July 31, 2018)