BiophysTO Lunchtime Talks

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The Active Ear

The ear is a remarkable detector: It is both highly sensitive and selective, and operates over a large dynamic range spanning more than 12 orders of magnitude. Not only does it respond to sound, but emits it as well. These sounds, known as otoacoustic emissions (OAEs), provide a means to probe the fundamental biophysics underlying transduction and amplification in the ear. This talk will describe the empirical nature of OAE data, as well as theoretical approaches describing the underlying biomechanics using coupled oscillators. While this modeling focuses on the auditory system, an underlying goal is to identify emergent behavior (e.g., phase coherence) that arises universally in qualitatively similar complex biological systems (e.g., neural networks).

Host: Dr. Josh Milstein

(Refreshments and pizza will be provided)

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Thursday, January 28, 2016 – 12:00 pm, noon
Davenport Room, Chemistry Building
(and via streaming to Davis Building 4001 UTM)