

Name: **Emmanuel Hung**

SFU faculty/major: Biological Sciences

**Title of presentation:** Flirty Flashes: Finding Fly Flicker Fusion Frequencies

**Abstract**

Flies rely heavily on their vision for finding and recognizing mates. It has been shown that moving fly wings reflect light in a single flash with each wing beat. Furthermore, the number of wing beat flashes per second can differ depending on species, sex, and whether or not the fly has mated. Working with three major fly pest species, I sought to show that (1) these flies are also attracted to specific flash frequencies and (2) that their eyes are actually “fast” enough to discern those frequencies. The latter was done through recordings of electrode-stabbed fly eyes which were analyzed to determine the electrical response associated with exposing the insects to different light flashes. Potential applications for flickering lights in attractive ways may play a major role in preventing fly pest problems in veterinary, medical, and industrial settings.