Optical Coherence Tomography imaging of Fallopian Tube

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**Project Description:** Student will be engaged in a project to image surgical tissue biopsies of fallopian tube, to identify sources of contrast in the images. The goal is to eventually develop a miniature endoscope that can detect early stages of ovarian cancer that may begin in the tubes, in a non-destructive manner. Depending on timing, activities may involve: assisting with calibrating and readying the imaging instruments, observing surgery, assisting with obtaining images, image analysis, histological preparation and imaging, endoscope design and fabrication. Due to hazards of human tissue, student might not be involved in actual fresh tissue handling.

**Required Skills:** Basic geometrical optics knowledge, basic MATLAB skills. Biological knowledge is not required.

**Ideal Skills:** Zemax modeling, Solidworks, signal or image processing