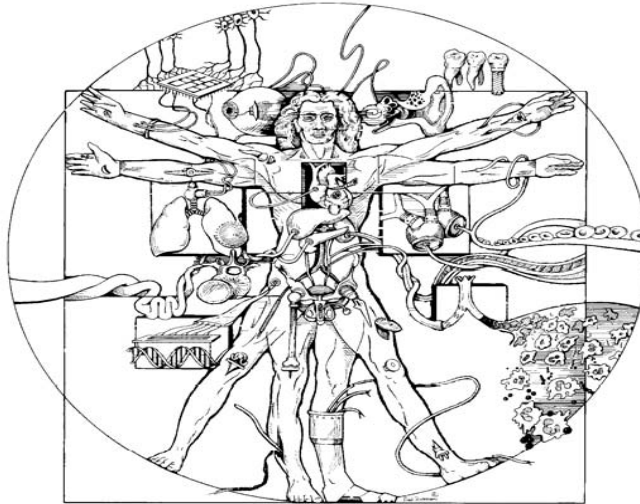


Biomedical Engineering Seminar



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“Novel electro-optic diffractive lenses for vision care”

Abstract: Presbyopia is a symptom that people have difficulty in focusing close objects onto retina because of decrease in accommodation with age. Conventional bifocal or trifocal lenses for this correction have been around for about 200 years, but they have limited field of view and sometimes cause dizziness and discomfort. An electro-optic lens allows voltage controlled change of the focusing power across the entire aperture. Such a lens must have high light efficiency, relatively large aperture, fast switching time, low driving voltage, and power-failure-safe configuration. These requirements have not been met simultaneously in the past. New switchable, flat, thin liquid crystal diffractive lenses that satisfy the above requirements will be discussed. Modeling, design, fabrication, and characterization of the lenses will be presented. They provide the capability of corrections for near-, intermediate-, and distance-vision. Such a lens may have revolutionary impact on the field of vision care.

Monday, November 19, 2007

2:00 pm

Keating 103

Host: Urs Utzinger, Ph.D. (626-9281)

Co-sponsored with ARIBI

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