



SEMINAR

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Hosted by Assoc Prof Low Boon Chuan

Tailoring the Optical Properties of Biomaterials via Sample Clearing and Mounting Media Design



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Dr Ping-Chin Cheng is a Professor in the Department of Electrical Engineering at the State University of New York. His research area involves optical microscopy, electron microscopy, lithography and x-ray microtomography.

Professor Cheng obtained his PhD in Anatomy from the University of Illinois, USA, an MSc in Plant Sciences and BSc Honors in Biology from the University of Western Ontario, Canada.

In microscopy, the specimen is an active participant in image formation. Its unique optical properties profoundly impact image quality, resolution, and clarity. This talk breaks down the essential optical characteristics of biological specimens and the techniques used to measure them. A major focus will be the critical role of the mounting medium. Because optimizing mounting media is essential for deep-tissue applications—such as light-sheet microscopy—we will cover the basics of designing custom media tailored to the unique optical demands of specific samples.