



Time: 3:00 pm, 10 January 2019 (Thursday)  
Venue: Room 702C, William M W Mong Engineering Building

# Snapshot polarization and phase microscope for biomedical applications



**Professor Rongguang Liang**

**The University of Arizona**

**Professor of Optical Sciences**

## **Abstract**

Polarization and phase imaging can be used to reveal the invisible dynamics of single molecules and tissues without staining or labeling. The polarization sensitive focal plane array enables the simultaneous measurement of both phase and polarization information in real time, it is insensitive to motion and vibration and can attain diffraction-limited resolution performance. The fast acquisition capacity of polarization and phase imaging will allow the coupling of spectral, phase, and polarization analysis and may reveal previously unattained vital information about the dynamics in living cells and tissues. This presentation will discuss the principle, system design, characterization, and demonstration of the snapshot multi-wavelength polarization and phase microscope.

## **Biography**

Dr. Rongguang Liang is a Professor at College of Optical Sciences, The University of Arizona, where he earned his PhD in 2001. Prior to his return to academia in 2011, he was a Senior Principal Research Scientist at Carestream Health Inc and Principal Research Scientist at Eastman Kodak Co. His research in industry focused on developing optical technologies for digital consumer imaging and biomedical imaging. Dr. Liang's current research focuses on optical engineering and biomedical optical imaging. Dr. Liang is a SPIE fellow and an Associate Editor of Optica.

**\*\*\* ALL ARE WELCOME \*\*\***

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