

Lester Wolfe Workshop in Laser Biomedicine

Probing blood disorders with light

Biomedical optics is playing an ever-increasing role in the diagnosis, monitoring and treatment of a number of diverse diseases. This workshop will feature the role of light in probing and monitoring of blood disorders. Malaria is one of the largest killers in the under-developed world and optics and spectroscopy may provide a cost-effective solution to detection and monitoring. Optics may also be used to monitor blood glucose levels in diabetes in a less invasive fashion. Sickle-cell anemia is another third-world blood disorder for which optics and imaging is being used to study the mechanism of vaso-occlusion.

Keynote: Energy, evolution, and cancer

Donald Coffey, Johns Hopkins University

Raman spectroscopy is paving the way towards molecular diagnosis of malaria

Torsten Frosch, Institut für Photonische Technologien

Compositional and structural assessment of biological tissues with polarized light

Alex Vitkin, Ontario Cancer Institute/ Princess Margaret Hospital

Sickle cell disease: physics and pathophysiology

L. Mahadevan, Harvard University Systems Biology, Harvard Medical School

Tuesday, November 24, 2009, 3:30-6:00 PM

Massachusetts Institute of Technology

Grier Room, 34-401

77 Massachusetts Avenue, Cambridge

Refreshments served at 3:00 PM

Sponsored by the G. R. Harrison Spectroscopy Laboratory, MIT, MGH Wellman Laboratories, the Harvard-MIT Division of Health Sciences and Technology, and the Center for the Integration of Medicine and Innovative Technology (CIMIT)