

Department of Physics & Astronomy

Dr. Dennis Matthews

Director of the National Science Foundation's Center for Biophotonics Science and Technology,
based at the University of California at Davis

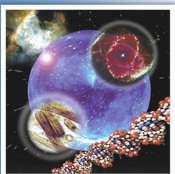
Friday, April 1, 2011

Time: 3:00 p.m. - 4:00 p.m.

BB 3.04.18

"The Application of Photon-Based Technologies to the Life Sciences - The Center for Biophotonics"

I will overview the science, technology and some commercialization activities and accomplishments of the Center for Biophotonics that is headquartered at UC Davis. Some of the signature projects that I will describe include: development and application of the first wide-field super-resolution microscope now marketed by Applied Precision Inc, flash x-ray imaging of the structure of biomolecules using the Linac Coherent Light Source at Stanford, development of Raman spectroscopic techniques for cell-sorting and drug testing, cellphone-based spectroscopy and microscopy for telemedicine, creation of a Point-of-Care Technology Center for rapid portable assays for infectious disease, fluorescence lifetime based tumor margin detection, UV and IR endoscope development for diagnosis of bladder or colon cancer, creation of the Biophotonics4Life International Consortium and the Biophotonicsworld.org knowledge bank. What all these projects have in common is the development of biophotonics tools that are applied to end-user (bioscientists or clinical researchers or practitioners) defined major challenges.



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