



Stephen Boppart, PhD, MD, University of Illinois at Urbana-Champaign, USA

Bio:

Stephen A. Boppart was born in Harvard, IL, in 1968. He received the B.S. degree in electrical and bioengineering and the M.S. degree in electrical engineering from the University of Illinois at Urbana-Champaign, Urbana, IL, in 1990 and 1991, respectively, the Ph.D. degree in electrical and medical engineering from the Massachusetts Institute of Technology, Cambridge, in 1998, and the M.D. degree from Harvard Medical School, Boston, MA, in 2000.

He was a Research Scientist with the Air Force Laser Laboratory, Brooks Air Force Base, San Antonio, TX, where he was engaged in research on developing national (ANSI) and Air Force laser safety standards. Since 2000, he has been with the University of Illinois at Urbana-Champaign, Urbana, from where he completed residency training in internal medicine in 2005. He is currently an Able Bliss Professor of Engineering in the departments of Electrical and Computer Engineering, Bioengineering, and Medicine, the Head of the Biophotonics Imaging Laboratory, Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign, and also the Director of Imaging at Illinois. He has authored or coauthored more than 300 invited and contributed publications, and more than 670 invited and contributed presentations. He holds more than 40 patents, filed or pending. His research interests include the development of novel optical imaging technologies for biological and medical applications, with particular emphasis on translating these to clinical applications. Dr. Boppart is a Fellow of IEEE, AAAS, OSA, SPIE, and AIMBE. He is also a member of the Biomedical Engineering Society, the American Association for Cancer Research, and the American Medical Association. He was named one of the top 100 innovators in the world by the Technology Review Magazine for his research in medical technology, and received the IEEE Engineering in Medicine and Biology Society Early Career Achievement Award. He received the Paul F. Forman Engineering Excellence Award from the Optical Society of America for dedication and advancement in undergraduate research education, and recently, the international Hans Sigrist Prize for his work in diagnostic laser medicine.



Presentation Title:

Biophotonics Imaging at the Meso/Macro Scale: Technologies, Applications, Directions, and Challenges

Abstract:

Biophotonics imaging offers technological solutions that span many dimensional scales, and can complement other imaging technologies for basic biological discovery as well as for clinical medical and surgical applications. This presentation will survey biophotonics imaging technologies at the meso/macro scale, and identify areas in need of further investigation and development. Technological and logistical challenges associated with introducing biophotonics imaging technologies into routine lab and commercialized clinical use will be discussed, as well as efforts to engage institutions and organizations to not only support the translation of technologies from the bench-to-bedside, but also support the transformation of our healthcare by moving new technologies from patient-to-population.