



Company Description

Labsphere is an internationally recognized photonics company located in central New Hampshire. Founded in 1979, it is now part of the Halma Group of companies.

Labsphere, Inc. designs, manufactures, and sells precision standard and custom radiometric and photometric products to aerospace, automotive, electronic and medical imaging, laser diode, LED, lighting, and optics industries. It offers portable solutions for spectral flux measurement; light measurement systems for thermal, optical, and electrical characterization of LEDs; and integrating sphere solutions for light-based applications ranging from large area customized sphere-based systems to small hand-held instruments, which include integrating spheres and components, light measurement systems, uniform light source calibration systems, reflectance standards and targets, reflectance materials and coatings, and instruments. The company also provides custom product development services, such as sensor calibration and testing, remote sensing camera calibration, night vision sensor calibration, radiance and solar simulation, lamp testing, LED/SSL measurement, laser power/diode testing, LCD backlight testing, and fiber output testing; and order tracking, software and manual request, calibration, technical support, and custom product development services. In addition, it provides OEM products, including customized solutions for applications, such as spectroscopy, diode pumped solid state lasers, clinical diagnostic and analytical instrumentation, and industrial optical metrology. The company offers its products for LED/SSL measurement, sensor calibration and testing, remote sensing camera calibration, lamp testing, laser power/diode testing, reflectance/transmittance, UVA/UVB sunscreen analysis, LCD backlight and fiber output testing, and veiling glare applications. It serves customers online; and through distribution partners in the United States and internationally.

Tutorial Description

This tutorial will provide the attendee with an overview of optical radiometry. This introduction to radiometry will provide fundamental information about what radiometric units to use, how to use them, and how to perform the proper measurements to record specific radiometric quantities. The use of standard light sources will be discussed for calibration. The use of radiometry and calibration as applied to UAS applications, specifically, how to apply radiometric units to field applications in UAS space including visible, multispectral, LiDAR, SWIR and thermal cameras and sensor payloads will be discussed.

Topics will include

- 1) reflectance-based techniques
- 2) sources, visible to thermal, and
- 3) image-quality tests



Instructor Bio: Chris Durell, Director of Business Development, Remote Sensing.

Chris graduated from Cornell University with an BSEE in 1993 and finished his MBA at Franklin Pierce College in 2003. Chris was the VP of Sales for both Labsphere and SphereOptics and has lead efforts to design optical, light measurement and remote sensing systems, products and technology for over 21 years. He is the chair of the IEEE P4001 Hyperspectral standards group and is a member of SPIE, IES, ASTM, CIE, CORM, ICDM and is a participant in CEOS/IVOS, QA4EO and other groups. He has several patents and has published papers in many applications of light metrology and remote sensing.