Stray Light Short Course

Course Overview

Photon Engineering's stray light short course is an intensive 3-day instruction on the language, science, theory, techniques, and calculations involved in all aspects of stray light.

Prerequisites

Attendees should have a rudimentary knowledge of optical design and radiometry. No knowledge of stray light topics is assumed; the course starts with very basic radiometric concepts and develops the relevant language, theory and techniques.
This short course is not taught with a particular software package in mind; the techniques and discussion topics are generic to the field of stray light. Consequently engineers using any of the commercial software packages will benefit from attending this short course.

Instructor

The instructor is Mr. Richard N. Pfisterer, president of Photon Engineering. Mr. Pfisterer has over 30 years experience in the areas of stray light analysis, algorithm and software development, hardware testing, contamination control, industry practices, and optical design. He has direct experience working with virtually all commercial (and several proprietary) stray light software. The material presented during the course reflects his very broad knowledge of the field.

Stray Light Short Course Synopsis

- What is Stray Light?
  - A Thought Experiment…
  - Design vs. Reality
  - Statements about Stray Light Analysis
  - Definition of Scatter
- Radiometry
  - The Language of Radiometry: Radiance -> BSDF
- Software Modeling Tools
  - Scatter
    - Definitions
    - Displaying / Interpreting BSDF Data
    - Types of BSDF Functions
      - Lambertian
      - Harvey-Shack/ABg
      - K-correlation
      - PSD
      - Paints
      - Particulates
      - Composites
      - Very Rough Surfaces
  - Scatter Importance Samples
  - Ray Ancestry
  - Modeling ghosts

- Stray Light Calculations
  - Critical / Illuminated Objects
  - Raytrace Paths
  - Point Source Transmittance (PST)
  - Stray Light Report
  - PST as Transfer Function
  - Percent Stray Light
  - Contrast / Veiling Glare
  - Ghost Image Analysis
  - Thermal Self-Emission
  - Narcissus
  - Extended Source Stray Light Calculations
  - Diffraction Calculations
- Stray Light Topics
  - Philosophy
  - Stops and Apertures
  - Baffles and Vanes
  - Reducing the Projected Solid Angle
  - Modifying Surface Attributes
  - Lens Bending
  - Cassegrain Baffle Problem
  - Beam Dumps
  - Reflective Baffles
  - Well-Baffled Systems
  - General Recommendations
- References

All attendees receive a copy of tutorial handout plus lecture notes and updates.

For more information take a look at our webpage

http://www.laser2000.de/index.php?id=373228

Registration:
Online or send your registration to Mrs. Victoria Benedikt:
v.benedikt@laser2000.de or by Fax: +49 (0)8153/405-33

Note:
Registrations or cancellations are only accepted in written form. For cancellation of the written registration before deadline of registration half of the attendance fee will be credited. The attendance fee will not be credited if we receive the cancellation after the deadline for the registration.
The minimum number of attendees is 7 persons. Therefore Laser 2000 reserves the right to cancel the tutorial.

After your registration you will receive a confirmation. The invoice will be sent to the company address via post, if there is no other instruction on your registration.

Your registration will be confirmed under conditional acceptance. You can reach the hotel for the training via S-Bahn from Munich (Line S5).

We are looking forward to welcome you at the FRED training in Herrsching.

With kind regards,

Victoria Benedikt
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