

Illumination Analysis using TracePro®

November 10-11, 2008

Day 1	<p>The TracePro User Interface</p> <ul style="list-style-type: none"> • Quick Tour of TracePro • Models and Windows • Controlling the View • The System Tree • Solid Modeling in TracePro • Constructive Solid Geometry • Primitive Solids • TracePro Solids <p>Creating a Model</p> <ul style="list-style-type: none"> • Creating/Importing/Editing Objects • Importing CAD Solid Models • Material and Surface Properties <p>Getting Output</p> <ul style="list-style-type: none"> • Grid and Surface Sources • Analysis Mode and Simulation Mode • Threshold & Limits • Irradiance/Illuminance Maps • Candela/Intensity Plots • Ray Sorting • Ray Histories and Tables
Day 2	<p>Advanced Features</p> <ul style="list-style-type: none"> • Custom Property Creation • Macro Commands & Programs • Importance Sampling • Raytrace Algorithm Overview • Raytrace Options • Optimizing Raytrace Parameters • Workshop-Examples

Stray Light Analysis using TracePro®

November 12, 2008

Day 1	<p>Simulating Stray Light in TracePro</p> <ul style="list-style-type: none"> • Grid and Surface Sources • Optimizing Raytrace Parameters • Using Ray Histories • Using Ray Sorting • Irradiance Map <p>Scattering and Stray Light</p> <ul style="list-style-type: none"> • BSDF vs. Scattered Intensity • Point Source Transmittance • Stray Irradiance <p>The Monte Carlo Method</p> <ul style="list-style-type: none"> • General Theory • Ray Splitting • Importance Sampling <p>Examples</p> <ul style="list-style-type: none"> • Newtonian Telescope • Cassegrain Telescope • Self-Emission
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TracePro® Scheme Programming

November 13-14, 2008

Day 1	<p>Introduction to Scheme</p> <ul style="list-style-type: none"> • Language overview • ACIS geometry representation • Language syntax & list processing • Simple Examples using the Macro Recorder <p>Scheme Programming</p> <ul style="list-style-type: none"> • Scheme functions & procedures • Defining and assigning variables and lists • Looping and branching • Input/output • Workshop: creating geometry using Scheme procedures
Day 2	<p>Advanced Topics</p> <ul style="list-style-type: none"> • Survey of Scheme primitive commands • Survey of ACIS and TracePro extensions • Workshop: creating scheme procedures • Workshop: automating analysis with looping and branching • Workshop: Exercises-Examples using Scheme (Randomized, Thin Sheet, Multiple Wavelengths, Repetitive RayTrace, Faceted Objects and others)

Pre-registration with payment must be made at least 3 weeks before the start of the course. The fee is refundable up to that point (\$600 fee is charged for later cancellations).

TracePro[®] Fall 2008 Training Courses

TracePro is a flexible and powerful ray tracing program based on ACIS[®], the industry-standard solid modeling kernel. It predicts intensity patterns in candelas and calculates illuminance on any surface. TracePro can model any surface type, and any surface can be made a source of light. TracePro features an easy and fun to use, state-of-the-art graphical Windows interface and strong data exchange capabilities with CAD and lens design software.

Illumination Analysis

November 10-11, 2008

In this intensive short course, you will learn how to analyze real illumination systems using TracePro, Lambda Research's revolutionary Opto-Mechanical Modeling Software. Many types of illumination will be covered, including light pipes, luminaires, concentrators, and projector illumination. After completing the course, attendees will be ready to use TracePro on their own or attend the advanced Stray Light Analysis or Scheme Programming Courses.

Stray Light Analysis

November 12, 2008

The prerequisite to this course is the 2-day Illumination Analysis Course. In this intensive course, you will get a solid practical foundation for using TracePro to solve stray light analysis problems and to simulate radiation transfer in optical systems. The main emphasis will be on practical problem solving, including examples and demonstrations using PCs. Basic theory of stray light analysis, solid modeling, and Monte Carlo method will be presented to provide background for the practical instruction.

Scheme Programming

November 13-14, 2008

The prerequisite to this course is the 2-day illumination course or equivalent skill level in using TracePro. Scheme is a full-featured programming language that can be used to automate analysis and geometry creation in TracePro. You can execute single commands from a command line in TracePro or develop elaborate programs to run in "batch mode." In this intensive short course, you will learn how the Scheme language interacts with TracePro and with ACIS, the geometry kernel inside TracePro. You will learn the syntax and structure of the Scheme language and extensions to control TracePro and ACIS. You will learn to construct and debug your own Scheme programs to automate analysis tasks, including looping and branching.

Classes will be held at the **NEW** Lambda Research Corporation facility-25 Porter Rd., Littleton, MA 01460. Directions will be provided on request.

Lodging is available at nearby hotels. Ask if there are special rates for Lambda Research Corp.

Holiday Inn Boxborough	978-263-8701
Westford Regency Inn	978-692-8200
Residence Inn-Westford	978-392-1407

Attendees are responsible for their own room arrangements and should make reservations directly with the hotel.

Tuition includes all materials, individual use of computer, continental breakfast and lunch. Tuition must be paid in full prior to attendance. Minimum enrollments apply.

To register please send your check or credit card number along with the completed registration form to:

Lambda Research Corp.
25 Porter Road
Littleton, MA 01460 USA

Tel. 1-978-486-0766
Fax 1-978-486-0755
sales@lambdares.com

Registration Form

Company _____ Name _____
Address _____ City _____ State _____ Zip _____
Tel: _____ Fax: _____ E-Mail: _____

- Illumination Analysis-\$1,200
(November 10-11, 2008)
- Illumination and Stray Light Analysis-\$1,800
(November 10-12, 2008)
- TracePro Scheme Programming-\$1,200
(November 13-14, 2008)

Credit Card (Circle one): AmEx / Visa / MasterCard

Credit Card No. _____

Expires _____ Sec. Code: _____

Signed _____