# TracePro<sup>®</sup> Fall 2017 European Training Courses

TracePro is a flexible and powerful ray tracing program based on ACIS<sup>®</sup>, 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.

## Introduction to TracePro November 7-8, 2017

Day 1	Introduction to TracePro	Day 3	<b>Optimization with TracePro</b>
, -	<ul> <li>Introduction to TracePro</li> <li>Ray tracing Overview and Principles</li> <li>Importing geometry and creating geometry in TracePro</li> <li>Applying properties</li> <li>Defining sources</li> <li>Ray tracing</li> <li>Analyzing the results</li> </ul>		<ul> <li>Principles of optimization</li> <li>Overview of the 2D and 31 optimizers in TracePro</li> <li>Creating geometry in the optimizers</li> <li>Defining variables</li> <li>Defining optimization goal targets</li> <li>Optimization examples incorreflector, and light guide e</li> </ul>
Day 2	<ul> <li>Introduction to TracePro</li> <li>Review of Day 1 and Questions</li> <li>Creating custom properties</li> <li>The Scheme macro language and macro recorder</li> <li>Importance Sampling</li> <li>Raytrace options and settings</li> <li>Additional analysis tools including ray tables and path sorting</li> <li>TracePro utilities</li> </ul>	Day 4	<ul> <li>Optimization with TracePro</li> <li>Using the Scheme macro l the TracePro optimizers</li> <li>Tolerancing and sensitivity</li> <li>Optimizing the position an of CAD imported objects if</li> <li>Selecting the best surface a properties using the optimi</li> <li>Additional examples</li> </ul>

## **Optimization with TracePro** November 9-10, 2017

### Principles of optimization Overview of the 2D and 3D optimizers in TracePro Creating geometry in the optimizers Defining variables Defining optimization goals and targets Optimization examples including lens, reflector, and light guide example

### **Optimization with TracePro**

- Using the Scheme macro language in the TracePro optimizers
- Tolerancing and sensitivity analysis
- Optimizing the position and rotation of CAD imported objects in TracePro
- Selecting the best surface and material properties using the optimizer
- Additional examples

#### Please note that the Introduction to TracePro course should be considered a pre-requisite for the third and fourth days of training.

We strongly recommend students take, or have taken the Introduction 2 day course in the past, before moving on to the more advanced classes. Please contact us if there are any questions on these courses. A student taking all four days of training will leave with a full and complete knowledge of TracePro and its features and capabilities, and be ready to use that knowledge on a daily basis.



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 (\$800 fee is charged for later cancellations).

## TracePro<sup>®</sup> Spring 2017 European Training Courses

TracePro

**CERTIFIED** Training

### Introduction to TracePro November 7<sup>th</sup> to 8<sup>th</sup>, 2017

**Days 1 and 2** of our **Introduction to TracePro** training is an excellent option for users who have little or no experience with TracePro, as well as long-time users. The feedback we receive from this training is that everyone learns something new. We will cover all aspects of TracePro during these two days. In the first day of this two-day course we will take a TracePro model from beginning to end, starting with importing, defining, and modifying the geometry, then applying properties, defining sources, running the raytrace, and analyzing the results. Day 2 will focus on more advanced features in TracePro such as custom property creation, the macro language, Importance Sampling, advanced raytrace options, and the TracePro utilities.

Classes will be held at the **Technical University of Catalonia**, **SPAIN** and given in ENGLISH language.

<u>Address</u>: Universitat Politecnica Catalunya, Terrassa Campus Library, Campus Square 1, 08222 Terrassa, Barcelona (Spain).

Map: <u>http://bit.ly/2omyHRx</u>

Attendees are responsible for their own room arrangements and should make reservations directly with the hotel. Here are a few recommendations:

#### In Terrassa,

Don Candido, Rambleta del Pare Alegre, 98, 08224 Terrassa +34 93 33 33 00 Terrassa Park, Avinguda de Santa Eulàlia, 236, 08223 Terrassa +34 937 00 44 00 In Barcelona (direct train to Terrassa class, 40mn) Hotel Arc-LaRambla, Rambla 19-21, 08002, Barcelona +34 933 01 97 98

Tuition includes all materials, individual use of computer, beverages & refreshments as well as 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 Corporation 25 Porter Road Littleton MA 01460 USA Tel: 1-978-486-0766 • Fax: 1-978-486-0755 Email: sales@lambdares.com

### **Optimization with TracePro** November 9<sup>th</sup> to 10<sup>th</sup>, 2017

**Days 3 and 4** is our course on **Optimization in TracePro**. The first day of this intensive hands-on course will cover the theory behind optimization and then provide a full overview of the 2D and 3D optimizers available in TracePro. All aspects of the optimization process, including creating the geometry, applying properties, setting up sources, and defining optimization targets will be addressed. After that we will work though several optimization examples featuring lenses, reflectors, and light guides. Day 2 picks up where the first day leaves off and will cover more advanced topics in the TracePro optimizers including using the Scheme macro language to expand the capabilities of the optimizers. Additional hands-on examples will be presented including tolerancing with the optimizer and using the optimizer to select the best surface and/or material properties to meet a user defined goal.

### **Registration Form**

Company	Name	2			
Address	_City	Zip			
Tel:	Fax:				
E-Mail:					
<ul> <li>Introduction to TracePro-\$1,600</li> <li>Optimization with TracePro-\$1600</li> </ul>		(November 7 <sup>th</sup> to 8 <sup>th</sup> , 2017) (November 9 <sup>th</sup> to 10 <sup>th</sup> , 2017)			
Credit Card (Circle one): AmEx / Visa / MasterCard Please call your sales contact person if you would rather give the credit card details by phone.					
Credit Card No					
Expires	Sec. Code:				
Card Holder:					
Signed:					