

Laser Micro Machining

16th & 17th April 2007.

Presented by the
National Centre for Laser Applications
National University of Ireland, Galway

Objective

This course is designed to provide an understanding of the principles and applications of laser micro-machining, for engineers and managers in industry. No prior knowledge of laser applications is required but it is recommended that attendees have a basic training in science or engineering.

Aims of the Course

The course is designed to:

- Explain the basic principles of light, lasers and optics
- Provide an introduction to relevant laser systems
- Present an overview of laser micro-machining applications

Who Should Attend?

The course is intended for engineers and managers in industry and supporting agencies who require a knowledge of laser micro-machining, either for their current projects or for future product and process development. It is also design for those in companies who have to interact with suppliers of components or sub-systems related to this application.

Programme

This course is a two day training programme running from 10am to 5pm on day 1 and 10am to 4:30pm on day 2. The course will consist of a mixture of classroom learning and laboratory demonstrations. There will be ample opportunity to interact with the lecturing staff and with other delegates during the course.

Agenda

Day 1

09:30 Registration, coffee, welcome
10:15 Background to light, optics and lasers
11:15 Coffee
11:30 Laser systems for micro- machining
12:45 Lunch
14:00 Lab demonstration 1
16:00 Review of course material
16:30 Q&A
17:00 Close

Day 2

09:30 Micro-machining applications, drilling, micro-milling.
10:15 Cutting
11:00 Coffee
11:30 Surface modification
12:15 other micro-machining applications
12:45 Lunch
14:00 Laboratory demonstration 2
16:00 Discussion on future perspectives
16:30 Course review and close.

Laboratory demonstrations.

There will be two laboratory demonstrations of micro-machining processes.

Lab 1: Precision milling using an excimer micromachining system

Lab 2: Precision cutting using a DPSS laser system.

Location of Short Course

The course will be held at the National University of Ireland. Campus and Galway City maps can be found at the Lighthouse website at <http://www.nuigalway.ie/lighthouse/location.html>.

Course Lecturers

Course presenters include Professor Tom Glynn, Dr. Gerard O'Connor & Mr. Tony Flaherty.

- Professor Tom Glynn is the founder and Director of NCLA, and head of the Physics Dept. in NUI, Galway,
- Dr. Gerard O'Connor is the Manager of Fundamental Research at the NCLA.
- Mr. Tony Flaherty is Manager of Outreach Services at the NCLA.

Combined they have over 50 years experience in laser technology, 50 scientific papers, and have given over 40 laser-related courses for industry. Additional NCLA research and engineering staff will be available for demonstrations and consultations.

Accommodation

There are many hotels and B&Bs in Galway. Attendees are recommend to stay overnight on both 15th and 16th April to allow a prompt start to the course each day. Details of accommodation and other facilities in Galway can be found at <http://www.galway.net>.

Parking

There is some "pay and display" car parking available at NUI Galway at a rate of €6 per day. However you are recommended not to bring your car on campus if at all possible.

Fee and Registration

There is a fee of €700 which includes refreshments, lunches, reception and a paper copy of the lecture slides. *You are advised to register as soon as possible.* Places will be limited in this course to provide the best possible opportunity for the participants and lecturers to interact in a productive and informal way.

I wish to attend the Micro Machining training course.

Name: _____

Organisation: _____

Address: _____

Telephone: _____

Email: _____

Special Dietary Requirement? _____

Payment Purchase Order No. _____ Cheque for €700

Cheques should be made payable to "National University of Ireland, Galway"

Please register by returning this completed form to David Greenwood, National Centre for Laser Applications, National University of Ireland, Galway, Ireland or send details by email to: ncla@nuigalway.ie

Please note that cancellations cannot be accepted less than three working days prior to the event. Cancellations before the deadline must be sent in writing.
