An AILU Market Development Special Interest Group event

Solutions to today's manufacturing challenges:
Applications using cutting, drilling, marking, engraving and surface texturing

10 December 2014

TRUMPF UK
President Way, Luton LU2 9NL

PROGRAMME

08:30 – 09:25 **Registration and refreshments**

09:25 – 09:30 **Introduction**
Ric Allott (Science & Technology Facilities Council)

09:30 - 10:25 **Session 1**: Laser and competing cutting processes

Laser cutting of non-metallic materials
Gerry Jones (TRUMPF UK)

Comparison of laser, abrasive waterjet and wire-EDM and recent developments for fine cutting
Don Miller (Finepart Sweden AB)

5-axis waterjet versus laser
Dave Larcombe (Bystronic UK)

10:25 – 10:55 **Refreshment break**

10:55 – 11:55 **Session 2**: Drilling and other fibre laser applications

Flexible laser system for precision laser materials processing
Mo Naeem (Prima Power Laserdyne)

Quasi-CW fibre laser drilling of aerospace materials
Sundar Marimuthu
(Manufacturing Technology Centre)

Influence of the beam parameter product on fibre laser cutting of highly reflective materials
Frank Gaebler (Coherent GmbH)

Challenging applications using fibre lasers
Stuart McCulloch (SPI Lasers)

11:55 - 12:50 **Innovate UK industrial grants for Photonics**
Louise Jones (Knowledge Transfer Network)

Louise Jones, High Value Manufacturing and Photonics Specialist at KTN-UK, will make a 'setting the scene' presentation. Delegates will then have the opportunity to make an input to the Innovate UK's future industrial strategy and funding options. This is a great opportunity to voice your opinion and make sure that what you care about is put on the table for consideration.

12:50 - 13:40 **Lunch break**

13:40 - 14:50 **Session 3**: Pulsed laser applications

Glass and sapphire laser cutting
Andrew May (Rofin-Baasel UK)

A short review of methods and shortcomings and the benefits of ultrashort pulse laser filamentation

Scanned mask imaging
Dave Myles (M-Solv)

Pulsed UV laser processing of non planar surfaces and structures
Paul Apte (Rideo Systems and Micronanics)

The use of lasers in digital fabrication
Alan Ferguson (Oxford Lasers)

14:50 - 15:10 **Refreshment break**

15:10 **TRUMPF UK showroom tour and departure**

For on-line registration and details of travel and accommodation please follow the event link at www.ailu.org.uk

Chair's hopes for this workshop

Ric Allott is AILU Vice President and Business Development Manager at STFC's Central Laser Facility.

At the heart of laser materials processing is an increasing number of applications in which the laser use is well established. But for this event I want to push the boundaries by addressing laser solutions to the more challenging of today's manufacturing applications: ones that, for example, involve a material such as glass that is intrinsically difficult to process, or a material with a multilayer structure of which only the top layer is to be scribed/drilled without damaging the layer beneath. Other such applications include those where the workpiece presents a difficult geometry or topography and/or where multi-axis processing or the creation of a features with, say, a very high aspect ratio is required. And to provide a broader perspective to the workshop, I have included two presentations that address competing/complementary processes: water-jet and wire-EDM.

This workshop therefore highlights unique solutions to some of the really tough engineering problems that exist across a large number of industrial sectors. A key aim is to match solutions to potential clients.

Finally, we have taken the opportunity of an industrial laser community gathering to provide input to the future industrial UK strategy and funding options being considered by Innovate UK, by inviting Louise Jones, High Value Manufacturing and Photonics Specialist at KTN-UK, to 'set the scene' and elicit responses.

All in all, this is an event that is not to be missed.

Ric Allott, Workshop Chair.

AILU's Market Development Special Interest Group

The Market Development SIG was formed in 2003 with a brief to 'Grow the UK Market' for AILU members. It is out of the MD SIG that the 'Design for Laser Manufacture' website was formed (www.designforlaser-manufacture.com). The group was also responsible for producing the UK Laser Materials Processing statistics in 2009 and is currently partway to producing updated statistics for 2014.

Supporting organisations

TRUMPF

Knowledge Transfer Network

Registration

Contact details

AILU members can register simply by contacting the AILU Office (details below) Otherwise, please complete and return this form.

*Name: .....

Position: .....

*Organisation: .....

*Address: .....

.....

*Postcode: .....

Tel: ..... Fax: .....

*E-mail: .....

*mandatory field

Charges

I wish to register as a delegate:

❑	Not an AILU member	£ 110.00	(+ VAT = £132.00)
❑	Existing member of AILU	£ 95.00	(+ VAT = £114.00)
❑	Full time student	£ 35.00	(+ VAT = £42.00)
❑	Unemployed or retired	£ 45.00	(+ VAT = £54.00)

Payment options

❑ Please invoice me

❑ I wish to pay in advance by:
- ❑ Bank/Euro cheque in £ Sterling, payable to AILU
- ❑ Visa/Mastercard (billing in GBP):
  Name on Card
  Number _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Exp _ _/_ _
  Please debit my account

Signed: .....

Date: .....

Please return completed form to the AILU office, details below

AILU reserves the right to alter the programme or cancel the meeting at short notice and accepts no responsibility forte view expressed by delegates or speakers

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