

## Conference Proceedings

The proceedings of the LANE 2010 will be published in Elsevier's *Physics Procedia*.

This e-online platform, launched in 2008, focuses solely on the publication of high quality conference proceedings. By allowing conference delegates to publish their papers in a dedicated online issue on *Science Direct*, which is then made freely available throughout the world, *Physics Procedia* facilitates a fast dissemination.

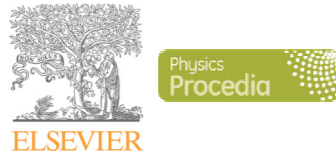
In addition, all papers published in *Physics Procedia* will also be incorporated into *Scopus*, the largest abstract and citation database for research literature and quality online sources.

All abstracts and papers will be reviewed in order to guarantee the highest possible quality of the LANE proceedings published in *Physics Procedia*.

For additional information on *Physics Procedia* please visit Elsevier's website [www.elsevier.com/locate/procedia-physics](http://www.elsevier.com/locate/procedia-physics).

### Editors

Prof. Michael Schmidt  
Prof. Frank Vollertsen  
Prof. Manfred Geiger



## Time Schedule

First announcement and first call for papers	October 2009
Second announcement and second call for papers	January 2010
<b>Submission of abstracts</b>	<b>February 15, 2010</b>
Notification of acceptance	March 01, 2010
<b>Submission of full papers</b>	<b>April 19, 2010</b>
Notification of paper review results	June 07, 2010
<b>Submission of final revised papers</b>	<b>July 05, 2010</b>
Final Conference Program	August 31, 2010
Deadline for Registration	September 10, 2010
<b>LANE 2010 Conference</b>	<b>September 21-24, 2010</b>

## Preliminary Program

### Tuesday, September 21

Casual reception and registration

### Wednesday, September 22

Plenary session with keynote presentations

Parallel sessions

Conference banquet

### Thursday, September 23

Keynote presentations and parallel sessions

### Friday, September 24

Parallel sessions

A social program for accompanying persons and a post-conference tour will be arranged as well.

## Venue

The LANE 2010 conference will be held at the campus of the Department of Physics of the Friedrich-Alexander-University Erlangen-Nuremberg.

The town of Erlangen is situated approximately 15 km north of Nuremberg. With approximately 3.5 million inhabitants and 150,000 companies, the Nuremberg Metropolitan Region is a trendsetting centre of national and international importance for Europe. It gives impetus to different developments concerning social, cultural, economic and technological aspects.

Erlangen can easily be reached by car, train or plane (Nuremberg International Airport). Further information on transportation and accommodation will be provided by the second announcement and on the LANE website.

## World Wide Web

For the latest information on LANE 2010, please visit our website on the World Wide Web:

[www.lane-conference.org](http://www.lane-conference.org)

## Fees

### Registration until July 16, 2010:

Participant	€ 850.00 (incl. VAT)
Presenting Author	€ 500.00 (incl. VAT)
Young Scientist*	€ 400.00 (incl. VAT)

### Registration after July 16, 2010:

Participant	€ 950.00 (incl. VAT)
Presenting Author	€ 600.00 (incl. VAT)
Young Scientist*	€ 400.00 (incl. VAT)

\*only registered postgraduate students of the SAOT

### Deadline for Registration: September 10, 2010

Members of the CIRP / WGP / WLT are granted a general discount of 10 % on these fees. Payments should be made on receipt of invoice.

For payment with credit cards a service fee of 5 % will be charged.

The conference fees include admission to the oral and poster presentations, the conference banquet on Wednesday, lunch for three days, refreshments, the casual reception and one set of proceedings.

Additional set of LANE proceedings: € 200.00 (incl. VAT)

Please note our *General Terms and Conditions for Conferences* on our website [www.lane-conference.org](http://www.lane-conference.org).

## Organisation

Bayerisches Laserzentrum GmbH (blz) in cooperation with the Chair of Photonic Technologies (LPT), University of Erlangen-Nuremberg

## Conference Office

Bayerisches Laserzentrum GmbH (blz)  
Konrad-Zuse-Straße 2-6  
91052 Erlangen, GERMANY

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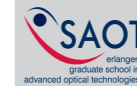
E-Mail: [info@lane-conference.org](mailto:info@lane-conference.org)

URL: [www.lane-conference.org](http://www.lane-conference.org)

6<sup>th</sup> International Conference and Exhibition  
on Laser Assisted Net Shape Engineering  
September 21-24, 2010 - Erlangen, Germany

# LANE 2010

## First Announcement and Call for Papers



## Conference Scope

At an ever faster rate, fundamental research produces new results, qualifying Photonic Technologies for more and more applications. It is the aim of the LANE 2010 to join researchers and engineers, so that scientific advances and economic needs can be matched for mutual benefit.

From both an academic and an industrial point of view, the sixth LANE 2010 focuses on "Photonic Technologies". Of special interest are laser material processing and laser applications in mobility, life sciences, information technology and energy generation, transmission and storage. The improvement in the field of ultrashort pulse lasers, for instance, opens up new chances for micro- and nano-material processing as well as for medical applications. New high brightness laser beam sources like single mode fibre lasers, disc lasers or fibre coupled diode lasers for high speed precision cutting, joining and remote processing, have the potential to profoundly improve modern production processes.

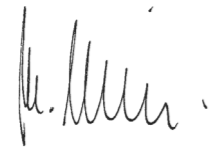
Participants will have the chance to attend research but also application oriented talks allowing them to get informed about actual advances in specific branches of industry as well as the latest results in science. A special session with contributions from the Collaborative Research Center 694, dealing with the integration of electronic components into mobile systems, will go beyond pure laser applications. Another highlight will be presented by the Young Academics Session of the Erlangen Graduate School in Advanced Optical Technologies.

To strengthen the bridge between science and economy is also an intention of the newly founded Chair of Photonic Technologies at the University of Erlangen-Nuremberg. This foundation consolidates the well-known status of Erlangen as a competence centre in the field of Photonic and especially of Laser Technologies. The sixth LANE conference shall bring together international experts sharing the enthusiasm for the power of light - we will welcome you all.

Erlangen, October 2009



Michael Schmidt



Manfred Geiger

## Preliminary Topics

The main focus of the LANE 2010 is on "**Photonic Technologies**" and especially laser material processing. The topics **Mobility, Life Sciences, Information Technology** and **Energy** are of special importance. Within these application fields the submitted papers should concern one of the following topics:

- Beam Sources**  
especially ultrashort pulse lasers, advanced solid state lasers, high-brightness diode lasers
- Components**  
devices for beam shaping and guidance, robotics and automation
- Processes**  
laser-based cutting, joining, surface treatment, forming, rapid manufacturing and tooling
- Process Optimisation**  
process sensing and controlling, simulation

### SPECIAL SESSIONS

LANE 2010 will go beyond photonics and will also illuminate associated technologies. The topics within the **Collaborative Research Center 694** (German Research Foundation) will deal with the integration of electronic components into mobile systems. Another special session of the LANE 2010 will deal with **Additive Manufacturing**.

### YOUNG ACADEMICS and POSTER SESSION

A highlight of the 6<sup>th</sup> LANE will be the talks and posters of the young scientists of the **Erlangen Graduate School in Advanced Optical Technologies (SAOT)**. Their focus will be on optical metrology, optical material processing, optics in medicine, optics in communication, optical materials and systems, and computational optics.

It is expected that one of the authors presents the paper personally at the conference. All papers will be reviewed and will be published in Elsevier's online journal *Physics Procedia*.

## LANE 2010 - Innovation Award

We are looking for **brilliant ideas and technological breakthroughs** in the field of laser science and engineering. The award is endowed with a prize money of **3,000 €**. For detailed information see our website [www.lane-conference.org](http://www.lane-conference.org).

## Abstract Submission

Abstracts must be submitted to the Conference Office by **February 15, 2010**. They should consist of approx. 300 words. Please provide the following information:

1. Author(s) (please underline correspondent)
2. Full address for correspondence
3. Title of paper
4. Classification: research or industrial application
5. Keyword(s):  
Please choose at least one from the list on the left.
6. Abstract (approx. 300 words)

Please send abstracts as MS-Word documents or as PDF-files written in English to the Conference Office. All submitted abstracts and papers will be reviewed.

## Scientific Committee

**Bach, F.-W.**; University of Hannover, Germany  
**Beyer, E.**; Fraunhofer IWS, Dresden, Germany  
**Cho, H.**; KAIST, Daejeon, Republic of Korea  
**Dearden, G.**; University of Liverpool, UK  
**Galarneau, P.**; Institut National d'Optique, Canada  
**Geiger, M.**; Bayerisches Laserzentrum, Erlg., Germany  
**Graf, T.**; University of Stuttgart, Germany  
**Jüptner, W.**; University of Aberdeen, UK  
**Kruth, J.-P.**; University of Leuven, Belgium  
**Meijer, J.**; University of Twente, The Netherlands  
**Miyamoto, I.**; Osaka University, Japan  
**Ostendorf, A.**; University of Bochum, Germany  
**Otto, A.**; University of Erlangen-Nuremberg, Germany  
**Poprawe, R.**; Fraunhofer ILT, Aachen, Germany  
**Pou, J. M.**; University of Vigo, Spain  
**Schmidt, M.**; Univ. of Erlangen-Nuremberg, Germany  
**Schuöcker, D.**; Technical University of Vienna, Austria  
**Sepold, G.**; BIAS, Bremen, Germany  
**Tönshoff, H. K.**; Laser Zentrum Hannover, Germany  
**Turichin, G.**; University of St. Petersburg, Russia  
**Vollertsen, F.**; BIAS, Bremen, Germany (Chairman)  
**Watkins, K.**; University of Liverpool, UK  
**Wu, Y.**; Shanghai Jiao Tong University, P.R. China  
**Zäh, M.**; Technical University of Munich, Germany  
**Zeilhofer, H.-F.**; University Hospital Basel, Switzerland

## Pre-Registration to LANE Conference Office FAX: +49 - 9131 - 977 90 11

Name: .....  Mr.  
 Ms.  
First Name: .....  Dr.  
 Prof.  
Address: .....  
.....  
.....

Phone: .....

Fax: .....

E-Mail: .....

YES, I would like to receive further information and

- I plan to participate.
- I will not participate but I wish to purchase the conference proceedings.
- I plan to bring an accompanying person.
- I wish to submit a paper (300 word abstract to be **submitted before February 15, 2010**). Please choose keyword(s) from the list of preliminary topics to announce your paper's content:

Keyword(s): .....  
.....

## Miscellaneous

The conference language is English. Papers will only be accepted if written in English and if in conformity with the authors' guidelines, which will be sent together with the notification of acceptance.

The international conference LANE 2010 is organised by the Bayerisches Laserzentrum GmbH (blz) in cooperation with the Chair of Photonic Technologies (LPT) and promoted by The International Academy for Production Engineering (CIRP), the German Academic Society for Production Engineering (WGP) and the German Scientific Laser Society (WLT).