

LAMP2013

LPM2013 - The 14th International Symposium on Laser Precision Microfabrication

HPL2013 - The 6th International Symposium on High Power Laser Processing

July 23-26, 2013, TOKI MESSE, NIIGATA, JAPAN

第6回レーザ先端材料加工国際会議

The 6th International Congress on Laser Advanced Materials Processing

LPM2013 第14回レーザ精密微細加工国際シンポジウム

HPL2013 第6回高出力レーザ加工国際シンポジウム

2013年7月23日(火)～26日(金)

朱鷺メッセ 新潟コンベンションセンター

<http://www.jlps.gr.jp/lamp/lamp2013/>

▶ **参加登録**

事前参加登録締切日: 7月1日(月)

(会期初日7/23以降オンライン登録も可能)

▶ **会場**

所在地: 〒950-0078 新潟市中央区万代島6番1号

アクセス: <http://www.tokimesse.com/visitor/access/>

▶ **主催**

一般社団法人レーザ加工学会

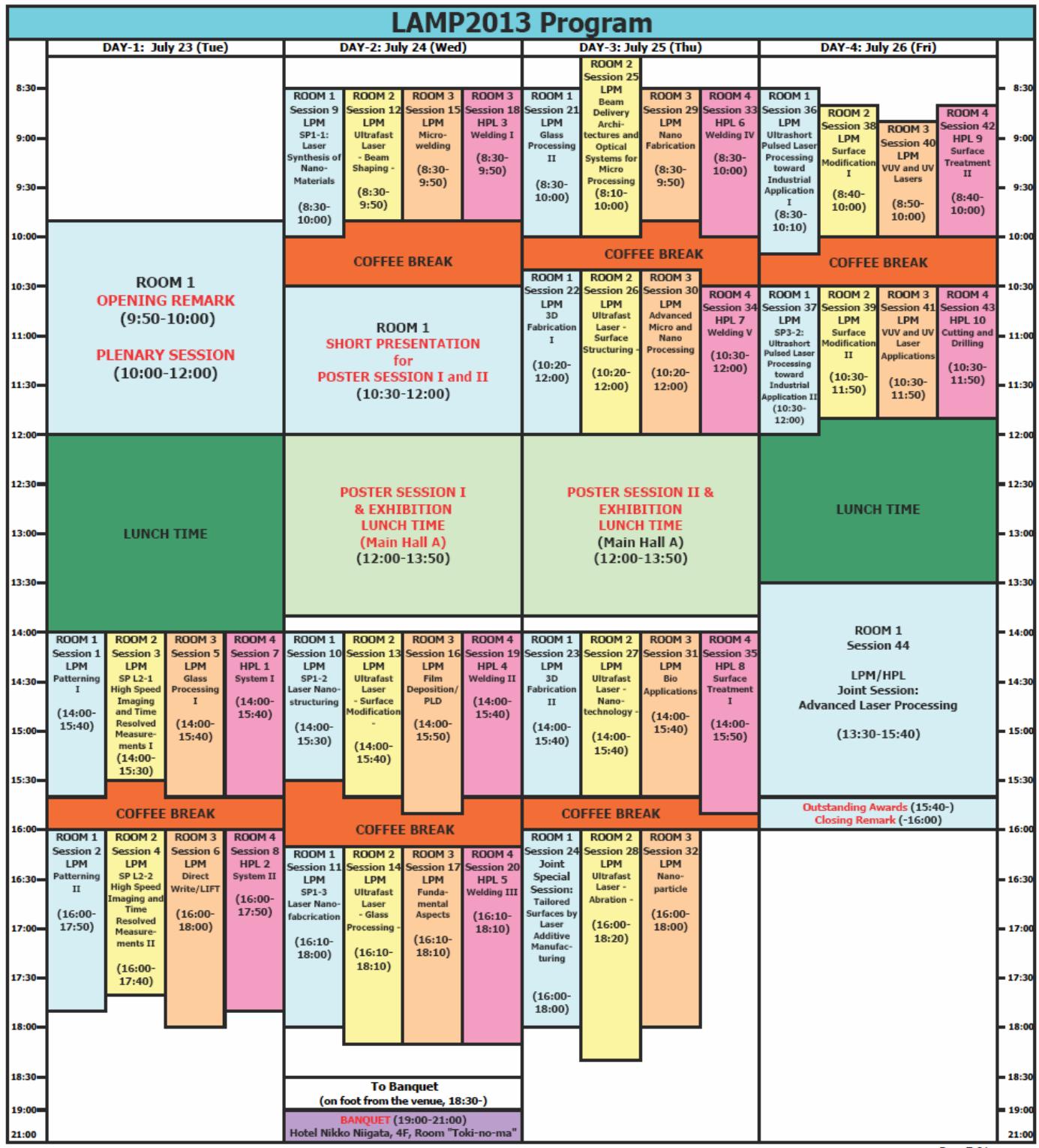
▶ **会議概要**

第6回レーザ先端材料加工国際会議 (LAMP2013: The 6th International Congress on Laser Advanced Materials Processing) は、第14回レーザ精密微細加工国際シンポジウム (LPM2013: The 14th International Symposium on Laser Precision Microfabrication), 第6回高出力レーザ加工国際シンポジウム (HPL2013: The 6th International Symposium on High Power Laser Processing) より構成され、4日間の日程で、マイクロ・ナノ加工、マクロ加工における基礎科学から産業応用までを広く議論する国際会議です。当該分野におきまして基礎研究者、エンドユーザー、レーザマニュファクチャーが一堂に会し、レーザと材料の相互作用の基礎科学からレーザ加工技術の現状、次世代のレーザ加工のトピックスまでをカバーします。この会議を通して、レーザ加工を支える科学基盤を確立することはもとより、レーザ加工技術の実用化を制限する要因、それを克服するために必要な科学技術、将来市場の予測などが明確になることを期待します。多くの皆様のご参加ご来場をお待ち申し上げております。

LAMP2013組織委員長 杉岡 幸次

▶ **協賛** 一般社団法人工エクトロニクス実装学会、公益社団法人応用物理学会、光化学協会、一般社団法人スマートプロセス学会、公益社団法人精密工学会、社団法人電気加工学会、一般社団法人日本塑性加工学会、社団法人日本溶接協会、一般社団法人溶接学会、一般社団法人レーザー学会、一般社団法人レーザープラットフォーム協議会

►セッションチャート



Rev. 7-01

►研究発表予定数

プレナリー	3 件
招待講演	33 件
口頭発表	161 件
ポスター発表	33 件

計 230 件(国内 79 件, 海外 151 件)の研究発表を予定いたしております。
(2013 年 7 月 2 日現在)

►LPM スペシャルセッション

SP L1) Laser nanofabrication

Session Organizer: Hong Minghui, National University of Singapore

Co-organizer: Craig B. Arnold, Princeton University, USA

The Laser as a versatile tool has been finding extensive applications in advanced manufacturing and will continue to play a major role in the push toward fabrication of nanoscale structures due to its unique ability to produce non-contact, light based processing in air over a large area at a fast speed. To showcase recent research progress on laser nanofabrication, this session covers the research topics related to nanostructures fabrication, including new processing design, light interactions with materials at the nanoscale, laser surface nano-patterning and nano-materials synthesis by laser ablation and laser induced chemical reactions.

SP L2) High speed imaging and time resolved measurements in laser processing

Session Organizer: Scott A. Mathews, The Catholic University of America, USA

The past decade has seen tremendous growth in the number of laser processing techniques being used in both research and industrial production. In addition to entirely new laser processes, the field has seen an expansion in the number of different materials being processed and dramatic advances in laser performance. As a result of this growth, many new processes are not fully understood. In order to fully characterize these processes, many researchers have employed high speed imaging and time resolved measurements to study laser-matter interactions in real time. In many cases, these *in situ* measurements have revealed important and unexpected information about the physics of the processes. This special session is designed to promote the exchange of ideas and results in the area of high speed imaging and time resolved measurements with the goal of creating a better understanding of the physical mechanisms associated with these novel and ever-expanding laser processes.

SP L3) Ultrashort pulsed laser processing toward industrial application

Session Organizer: Yasuhiro Okamoto, Okayama University, Japan

Co-organizer: Jens Holtkamp, Fraunhofer-Institut fuer Lasertechnik ILT, Germany

Ultrashort pulsed laser has been widely used and its nonlinear process has been attracting the interests for industrial applications. In order to realize industrial applications by ultrashort pulsed laser, not only process understanding but also related technology has been investigated and developed. This session covers research topics of ultrashort pulsed laser processing and related technologies towards industrial applications.

LPM/HPL JOINT SESSION: Tailored Surfaces by Laser Additive Manufacturing (LAM)

Session Organizer: Paul Denney, Lincoln Electric, USA

Co-organizer: Kunihiko Washio, Paradigm Laser Research Ltd., Japan

Laser Additive Manufacturing (LAM) has recently been described as "the next industrial revolution" and has been the focus of researchers, governments, corporations, and the media. Most of the interest has been focused on the "digital manufacturing" part of this technology where lasers are used to fuse materials into three dimensional models or function components with applications including consumer products, aerospace, medical, automotive, and more. While LAM has been touted as a recent development it actually dates back to 1980's when lasers were first used to alter the surfaces of materials to improve wear and corrosion properties of materials or for simple repairs damaged/worn components. Recently in parallel to the precision digital manufacturing aspect of LAM, there has been major improvements and implementation of laser "surface tailoring" for heavy manufacturing, mining, power generation, oil and gas, and agriculture. These applications as before include the addition of layers for wear and corrosion protection or to selectively add material with low heat input for repairing high value components. These new applications have been justified by material cost reduction, life extension, processing rate, and/or performance improvement but ultimately all of these actually are reduction of the lifecycle costs. Some of this has been made possible/practical due to advances in lasers and optics and/or new processing techniques. This session will focus on past and present applications of this area of LAM and some of the new developments in this area.

▶**招待講演** (敬称略)

プレナリーセッション

Paul Denney, Lincoln Electric, USA

Laser additive manufacturing (LAM) for tomorrow's economy

Katsumi Midorikawa, RIKEN, Japan

Progress of XUV science by high-order harmonic generation

Dirk Petring, Fraunhofer Institute for Laser Technology ILT, Germany

Mission possible: the next generation of multi-kW laser materials processing

LPM スペシャルセッション

SP L1

Naoto Koshizaki, AIST-National Institute of Advanced Industrial Science and Technology, Japan

Fabrication and application of submicron spherical particles prepared by pulsed laser melting in liquid

Din Ping Tsai, Research Center for Applied Sciences, Taiwan

Laser fabrication of plasmonic nanostructures for 3D light manipulation

SP L2

Pere Serra, Universitat de Barcelona, Spain

Time-resolved imaging of liquid ejection during laser printing

Valdas Sirutkaitis, Vilnius University, Lithuania

Time-resolved digital holography in the investigation of ablation and micro fabrication by femtosecond pulses

Claudia Unger (→**Ludger Overmeyer**), Laser Zentrum Hannover, Germany

Time-resolved studies of laser-assisted bioprinting

SP L3

Bastian Becker, TRUMPF Corporation KK, Japan

Latest ultra short pulsed laser technology for new materials, applications and industries

Arnold Gillner, Fraunhofer-Institut fuer Lasertechnik ILT, Germany

Prospects and requirements for industrialisation of ultrashort pulse laser technology

Manabu Shiozawa, HITACHI Ltd., Japan

Simultaneous multi-bit recording and driveless reading for permanent storage in fused silica

レギュラーセッション (LPM)

Martin Booth (→**Patrick Salter**), University of Oxford, UK

Dynamic optics for three-dimensional laser processing

Eric Pei-Yu Chiou, UCLA, USA

Photothermal nanoblade for cell surgery and large cargo delivery

Feng Chen, Shandong University, China

Femtosecond laser micromachined dielectric crystals for photonic applications

Maria Farsari, IESL-FORTH, Greece

Beyond the diffraction limit: Laser fabrication of 3D nanostructures

Nils Hartmann, Universitat Duisburg-Essen, Germany

Laser processing of ultrathin organic coatings: Prospects in nanoscale patterning, Functionalization and Manipulation

Masahito Katto, Miyazaki University, Japan

Development of ultrashort pulsed VUV laser and its applications

Takanobu Kisu, Kyushu University, Japan

Recent advancement in laser processing of long-length high-performance RE-123 superconducting wires

Thomas Lippert, Paul Scherrer Institut, Switzerland

Laser-induced forward transfer (LIFT) of functional materials

Michel Meunier, Ecole Polytechnique de Montreal, Canada

Plasmonic enhanced pulsed laser nanoprocessing and cell nanosurgery

Ludger Overmeyer, Leibniz Universitat Hannover, Institut fuer Transport- und Automatisierungstechnik, Germany

Polymer based planar optronic systems

Kentaro Tatsukoshi, Asahi glass foundation, Japan

Through glass via (TGV) formation technology for 3D integrated packaging

Michael Withford, Macquarie University, Australia

Integrated optics and photonic devices: femtosecond laser direct write technique and laser written waveguides

レギュラーセッション (HPL)

Steffan Bonss, Fraunhofer IWS, Germany

Laser heat treatment technologies for wear protection of steam turbine blades

Kim Young Sik, Korea Institute of Science and Technology Information, Korea

Recent technological tendency of laser/arc hybrid welding

Muneharu Kutsuna, Advanced Laser Technology Research Center Co., Ltd., Japan

Study on mosaic joint of CFRP composite using a Q-switch YAG laser

Kogel Hollacher Markus, Precitec KG, Germany

Latest approaches in process monitoring for high power processing on hybrid welding

Thomas Seefeld, Bremer Institut fuer angewandte Strahltechnik GmbH, Germany

New developments in filler wire assisted laser joining of aluminum

Kenji Shinozaki, Hiroshima University, Japan

Solidification cracking susceptibility of modified 9Cr-1Mo steel weld metal during hot wire laser welding with narrow gap groove

LPM/HPL ジョイントセッション

Eckhard Beyer, Fraunhofer IWS, Technische Universitaet Dresden, Germany

High-rate laser deposition

Jeff Franks, Laserline KK, Japan

Cladding & heat treatment with high power, fibre-coupled, diode lasers

Marco Goebel, Fraunhofer-Institut fur Lasertechnik ILT, Germany

Repair of compressor airfoils by laser metal deposition and process monitoring with a CPC-system

Alexander F. H. Kaplan, Lulea University of Technology, Sweden

Angle- and absorptivity-modulation at inclined wavy processing fronts

Xinbing Liu, Panasonic, USA

Drilling holes with flexible shapes (tentative)

Minlin Zhong, Tsinghua University, China

Laser cladding in China: from fundamental research to industrial applications

Steven M. Yalisove, Michigan University, USA

Interface Driven Response to 150 femtosecond irradiation of very thin films: Thresholds, Nanoparticles, and a little bit of Shock

▶参加登録

事前参加登録締切日： 7月1日（月）
 (会期初日7/23以降オンライン登録も可能)
 参加登録サイト: <http://www.jlps.gr.jp/lamp/lamp2013/>
 ホテル予約締切（JTB西日本）： 7月5日（金）

登録種別	JLPS会員	非会員	登録費に含まれるもの
早期登録*（フル・レジストレーション） (5月1日締切)	54,000 円	60,000 円	抄録集“LAMP2013 Congress Program & Technical Digest”, “Online Proceedings of LAMP 2013”(会議後発行) 展示会
事前登録*（フル・レジストレーション） (7月1日締切)	70,000 円	76,000 円	
当日登録*（会期：7/23-26） (オンライン・フル・レジストレーション)	70,000 円	76,000 円	
一日参加登録	36,000 円	39,000 円	抄録集“LAMP2013 Congress Program & Technical Digest”, “Online Proceedings of LAMP 2013”(会議後発行) 展示会
学生登録（学生証要提示） (社会人ドクターには適用されません)	12,000 円		
パンケット（会期2日目7/24夜） (パンケットチケットは、予めオンライン登録にて、お申込みください)	フルレジストレーション		無料招待
	招待講演者 同伴者*（お一人目）		無料招待
	招待講演者 同伴者*（お二人目）		6,000 円
	フルレジストレーションの同伴者*		6,000 円
	学 生（学生証要提示）		6,000 円
	一日参加		12,000 円
	出 展 者		12,000 円

*同伴者はご家族に限ります。

▶エリアマップ



▶企業スポンサー

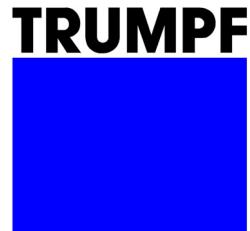
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▶カタログ展示
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►出展（テーブルトップ展示）

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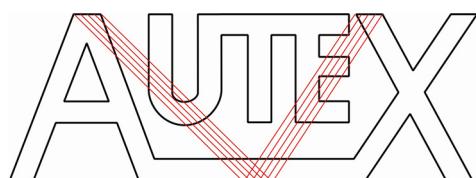
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▶お問合せ先

参加登録に関するお問合せ

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