

ABSTRACT DEADLINE: APRIL 1, 2015

ICALLO[®]

34th INTERNATIONAL CONGRESS ON
APPLICATIONS OF LASERS & ELECTRO-OPTICS

**PEER REVIEWED
PAPERS!**

CALL FOR PAPERS

Sheraton[®] Atlanta Hotel ▪ Atlanta, GA USA

October 18–22, 2015

ICALLO[®] brings together the leaders and experts in the field of laser material interaction, providing the world's premier platform for sharing new ideas and discovering breakthrough solutions.

Focus: Laser Materials Processing, Laser Microprocessing, Laser Nanomanufacturing, Laser Applications, Laser Systems, Direct Diode Processing, Ultrafast Laser Processes and more.

Presented by:



**Laser Institute
of America**

Laser Applications and Safety

www.icalleo.org

PEER REVIEWED PAPERS! Submitters can select the option to have their technical paper reviewed by a blind peer review process. The peer review panel will look for quality of the research, relevance, and significance of the findings. These papers will be identified as such in the ICALEO[®] 2015 Congress Proceedings and will comprise a special issue of *Journal of Laser Applications (JLA)*.

About ICALEO[®]

The International Congress on Applications of Lasers & Electro-Optics (ICALLO[®]) has a 33 year history as the conference where researchers and end-users meet to review the state-of-the-art in laser materials processing, laser microprocessing, and nanomanufacturing as well as predict where the future will lead. From its inception, ICALEO has been devoted to the field of laser materials processing at macro, micro, and nanoscales and is viewed as the premier source of technical information in the field. Each year ICALEO features areas of topical interest. This year's featured sessions include diode lasers for processing and pumping, laser process monitoring and control, laser processing of biological materials, lasers in nanotechnology and environmental technology, laser hybrid processing, laser manufacturing for alternative energy sources and laser business development.

ICALEO® Technical Sessions

Congress General Chair: *Silke Pflueger, DirectPhotonics, Inc.*

LASER MATERIALS PROCESSING CONFERENCE

Laser Materials Processing Conference Chair: *Christoph Leyens, Fraunhofer IWS*

The Laser Materials Processing Conference will explore new developments of applications, processes and laser beam sources in laser materials processing. The laser is a fundamental tool in today's industrial production and new development of applications, processes and laser beam sources have driven us to levels we have never seen before. This conference will let you experience and discuss the applications and trends of tomorrow. Conference papers are solicited on a wide range of topics related to Laser Materials Processing, including but not limited to the following:

INDUSTRIES

- Aerospace
- Automotive
- Medical Device
- Energy / Oil & Gas
- Microelectronics
- Shipbuilding / Heavy Manufacturing

PROCESSES

- Advanced Machining
- Cutting / Drilling
- Direct Metal Deposition
- Environmental & Safety Issues
- Forming & Cleaning
- Hybrid Processes
- Process Modeling & Control
- Additive Manufacturing / 3D Printing
- Remote Welding
- Surface Modification & Structuring
- Welding / Brazing / Joining
- Marking

LASERS & SYSTEMS

- Advanced Laser Sources
- Diode Lasers
- Diode-pumped Lasers
- Fiber and Disk Lasers
- Ultrafast Lasers
- Hybrid Systems
- Laser Optics & Quality
- Sensing & Monitoring
- Software Development

LASER MICROPROCESSING CONFERENCE

Laser Microprocessing Conference Chair: *Michelle Stock, mlstock consulting*

The Laser Microprocessing Conference will consist of papers featuring a wide spectrum of applications and innovative equipment from biomedical applications to photovoltaics. The presentations will introduce the latest and greatest advancements in their respective fields, presented by world's leading companies and research organizations. This Conference solicits papers on a wide range of topics related to laser microprocessing, including but not limited to the following:

APPLICATIONS

- Spatial & Temporal Pulse Shaping Applications to Microprocessing
- Integrated Optics / Photonics
- Lasers in Electronics and Semiconductor Production
- Lasers in Fabrication of Solar Cells and Photonic Components
- Lasers in Automotive including Fuel-Efficiency
- Medical Device Fabrication
- MEMS Fabrication & Lasers in Microsystems Technology

PROCESSES

- Micro-Cutting / Drilling / Milling
- Laser Ablation
- Laser Micro-joining
- Material & Surface Property Modification
- Nonlinear & Near-field Optical Processes
- Two-photon Processes & Microstereolithography
- Ultrafast Laser Processes

SYSTEMS

- Beam Delivery Systems & Scanning Optics
- Laser Micromachining Systems
- Motion Control in Microprocessing
- Picosecond & Femtosecond Lasers
- UV/VUV & EUV Sources

NANOMANUFACTURING CONFERENCE

Nanomanufacturing Conference Chair: *Yongfeng Lu, University of Nebraska-Lincoln*

The Nanomanufacturing Conference will consist of presentations on nanomanufacturing, which have relevance to laser technologies. Much progress has been achieved in laser direct writing for nanomachining, nanofabrication using femtosecond lasers and laser assisted growth of nanostructures. This conference will highlight research in emerging nanomanufacturing technologies in 3D micro/nanomachining, 2-photon lithography, digital fabrication, nanoparticle formation, surface nanostructuring and laser assisted growth and epitaxy. This Conference solicits papers on a wide range of topics related to Nanomanufacturing, including but not limited to the following:

HIGHLIGHTED SESSIONS

- Nanomanufacturing of Energy Devices
- Nanomanufacturing of Photonics
- Nanometrology
- Nanofabrication of Biomedical Devices
- Nanofabrication of Functional Materials & Devices

APPLICATIONS

- Biomaterial Nanofabrication
- Biomedical Devices
- Cognitive Devices
- Communications
- Energy Harvest and Storage
- Imaging
- Information Technology
- Laser Interactions with Biomolecules
- Nano / Bio-sensors
- Nanoelectronics
- NEMS
- Solar Cells
- Photonics and Metamaterials
- Plasmonics
- Surface Treatments
- 3D Printing

PROCESSES

- DUV / EUV Lithography
- Femtosecond Laser Machining
- Laser Direct Writing
- Laser Chemical Vapor Deposition
- Holography & Interferometry
- Maskless & Soft Lithography
- Nanofiber Electrospinning
- Nanoimprinting / Embossing
- Nanoxerography
- Near Field Scanning Optical Methods
- Plasmonic Imaging
- Pulsed Laser Deposition
- X-Ray Lithography / LIGA

SYSTEMS

- Laser Scanners / Profilometers
- Nanomanipulators
- Nanometrology Platforms
- Nanopositioners
- Nanoscale Rapid Prototypers
- NSOM / SNOM
- Optical / Laser Lithography
- Steppers & Aligners
- Chemical Vapor Deposition Reactors
- Advanced Laser Systems

ICALEO® 2015 - Peer Reviewed Papers

Submitters can select the option to have their technical paper be reviewed by a blind peer review process. The peer review panel will look for quality of the research, relevance, and significance of the findings. These papers will be identified as such in the ICALEO 2015 Technical Digest and Proceedings. Deadline for your peer reviewed manuscript is June 16th (no extensions will be granted). Non-peer reviewed manuscripts are due July 15th.

Business Forum & Panel Discussion

**Co-Chairs: Klaus Loeffler, TRUMPF Laser and Systems GmbH
Bo Gu, BOS Photonics**

The ICALEO Business Forum & Panel Discussion provides attendees with an exclusive opportunity to listen to and interact with industry experts, business leaders, and decision makers on significant issues facing the laser and photonics industry. Distinguished speakers from around the world will address emerging business topics, and how researchers and laser companies can profit in this arena. This Forum is open to all attendees; you will not want to miss this fantastic opportunity to engage with the speakers during the panel discussion, expand your professional development and enhance your own business perspective.

17th Annual ICALEO Student Paper Award Contest

Awards will be presented to 1st, 2nd and 3rd place winners. Prize winners will be announced during the Closing Plenary Session of ICALEO on Thursday, October 22nd and included in an article in the *LIA TODAY* newsletter featuring ICALEO.

Submitted papers will be reviewed by conference chairs and slotted into appropriate sessions. Judges will not review their own students. Students with accepted papers will be judged by an international panel on the following criteria:

- Originality of Topic / Material Presented
- Scientific and Technical Merit / Impact
- Clarity of Presentation (Oral & Visual)

Space in this contest is limited – encourage your students to participate! For more information, email: icaleo@lia.org

Poster Presentation Gallery

Poster presentations that submit a manuscript will be included in the ICALEO Proceedings. This is an excellent opportunity for networking and the sharing of ideas. Spotlight your work with two full days of exposure.

Breakfast with the Presenters – As a bonus, Poster Presenters will be by their posters on Wednesday morning to answer questions and present their research to ICALEO attendees. Awards will be presented to 1st, 2nd and 3rd place winners.

How to Present

Submitted abstracts should contain original, recent, unpublished results of application research, development, or implementation. Authors are encouraged to indicate the current phase of their work. Commercial papers will not be accepted.

Authors are asked to secure company and/or government security clearance to present and publish as early as possible. This enables LIA to ensure the quality of the conference and to minimize last minute withdrawn papers.

Important Dates

Abstract Submission Deadline	April 1, 2015
Manuscript Submission Deadlines:	
• Peer Reviewed Papers	June 16, 2015
• Non-peer Reviewed Papers	July 15, 2015
Speaker Registration & Payment Due	August 3, 2015

Please secure travel and accommodation funding through sponsoring organizations prior to submitting abstracts. We regret that travel and accommodation funding is not available through LIA.

Final Manuscript Submission

Manuscript deadlines must be strictly observed. Late manuscripts will not be published in the proceedings. This policy enables LIA to better serve congress participants by publishing the proceedings before the congress. Your cooperation is appreciated by all.



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of America**
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