

LIA

TODAY

VOLUME: 31 NO: 5 | ICALEO 2023

LIA ANNOUNCES NEW
EXECUTIVE DIRECTOR

PG 4

ICALEO 2023 WRAP
UP ARTICLE

PG 8

2023 ARTHUR L.
SCHAWLOW WINNER

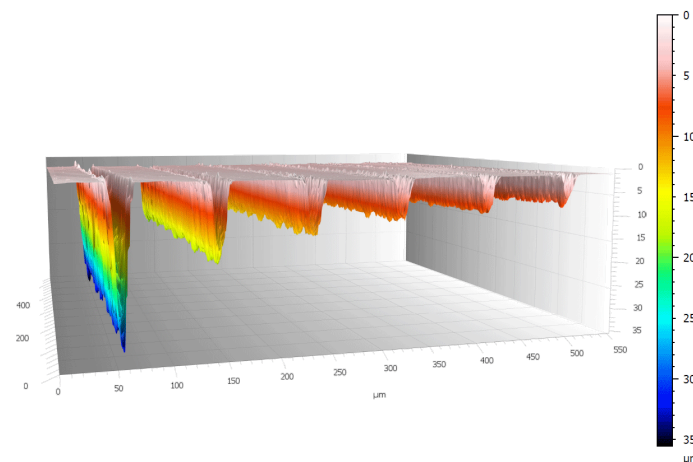
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THE OFFICIAL NEWSLETTER OF LIA

LIA TODAY is published bimonthly to educate and inform students and professionals of challenges and innovations in the field of photonic materials processing.

ISSN 2690-5981



2023 ICALEO WRAP UP ARTICLE

By, John McCormack

Take a look back at some of the highlights of this year's event in Chicago, IL!

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DR. PETER LEIBINGER NAMED LIA'S 2023 SCHAWLOW WINNER

The Laser Institute is thrilled to announce the recipient of the prestigious Arthur L. Schawlow Award for 2023, the esteemed Dr.-Ing. E. h. Peter Leibinger.



DEDICATED INTERVIEW WITH ICALEO 2023 PLATINUM SPONSOR AMPLITUDE

Read an interview with Vincent Rouffange of Platinum Sponsor Amplitude Laser Group, a longtime supporter of the ICALEO conference.

LIA Announces Gilbert Haas as New Executive Director

Orlando, FL - The Laser Institute (LIA), a leading non-profit organization dedicated to advancing laser technology and its applications, is pleased to announce the official appointment of Gilbert Haas as its new Executive Director.

With an illustrious career in the field of laser technology spanning over four decades, Mr. Haas brings a wealth of experience and a proven track record of leadership. His dedication specifically to The Laser Institute also spans years. He is a fellow of the LIA and served on the LIA Board of Directors in 2014, 2015, and 2016. He served as treasurer on the Executive Committee in 2017 and 2018. In 2019 he served as President Elect and as President in 2020 and 2021. Recently he has served as Past President in 2022 and 2023. His strategic vision, passion for the company, and commitment to the organization's mission make him an ideal fit to lead The Laser Institute into its next phase of growth and impact.

In his current role as the LIA Executive Director, Mr. Haas states: *"I am honored to be elected by the LIA Board of Trustees as the new LIA Executive Director. Being a business founder/owner since 1992 and member of the LIA board since 2014, I will use this experience to preserve and evolve the organization. I am proud to be the custodian of this prestigious organization that was organized over 50 years ago by the founding fathers."*

The Laser Institute looks forward to a bright future under the leadership of Gilbert Haas, and we are confident that his appointment will further strengthen our commitment to advancing laser technology for the betterment of society.

About The Laser Institute:

The Laser Institute of America (LIA) is the professional society for laser applications and safety serving the industrial, educational, medical, research and government communities throughout the world since 1968.

Gilbert Haas Bio:

Gilbert Haas has worked with industrial lasers for the past 40+ years. His education consists of a BS degree in Electrical Engineering from the University of Wisconsin and an AS degree in Laser Technology from North Central Technical College. He also has advanced his formal education by completing several additional classes in the fields of Mechanical Engineering and Metallurgy. Throughout his career, Mr. Haas has taught classes, given many lectures, published numerous papers and holds several national and international patents in the field of industrial laser applications.

Mr. Haas has 40 years of experience with lasers and 32 years of business experience as an entrepreneur and founder/owner of Haas Laser Technologies, Inc. and Flanders-Ironia, LLC.



His first official Executive Director's Message is as follows:

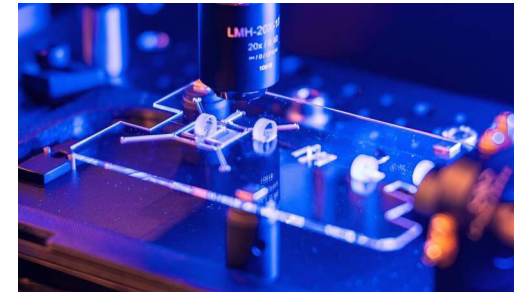
"I am honored to be elected by the LIA Board of Trustees as the new LIA Executive Director.

Being a business founder/owner since 1992 and member of the LIA board since 2014, I will use my experience to preserve and evolve the organization for future growth. I am proud to be the custodian, at this time, of this prestigious organization that was organized over 50 years ago by the founding fathers of the laser. I would like to thank the LIA Board of Trustees for placing this trust in me.

I look forward the responsibilities and duties of Executive Director. Please feel free to contact me if you need any help of have any questions regarding the LIA."

TRENDING IN THE NEWS: LIA'S TOP 4 ARTICLE PICKS

1

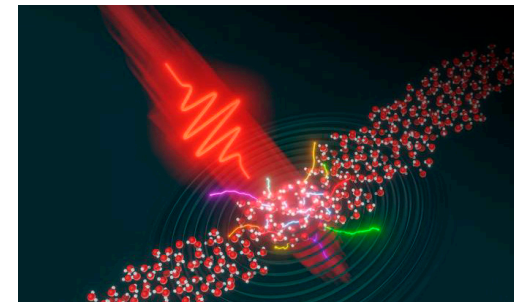


MAKING A FEMTOSECOND LASER OUT OF GLASS

A team at the Galatea Laboratory used a commercial femtosecond laser to make a femtosecond laser out of glass, no bigger than the size of a credit card, and with less alignment hassles. .

[Read more](#)

2

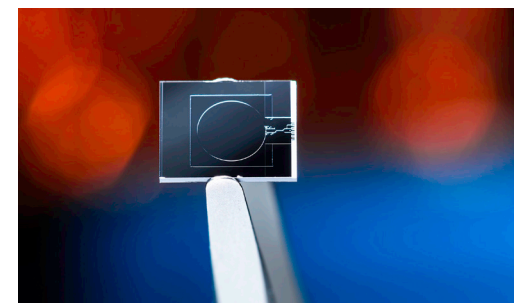


INTENSE LASERS SHINE NEW LIGHT ON THE ELECTRON DYNAMICS OF LIQUIDS

An international team of researchers has now demonstrated that it is possible to probe electron dynamics in liquids using intense laser fields and to retrieve the electron mean free path – the average distance an electron can travel before colliding with another particle.

[Read more](#)

3

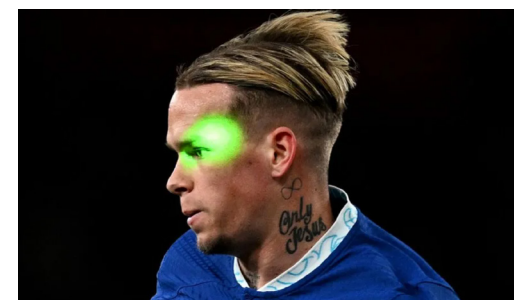


PHOTONIC CHIPS COULD GIVE DRONES A LIFT WHEN GPS IS UNAVAILABLE

Researchers at University of Rochester are developing photonic chips that could replace the gyroscopes currently used in unmanned aerial vehicles or drones, enabling them to fly where GPS signals are jammed or unavailable

[Read more](#)

4



LASER POINTERS: THE POCKET MONEY GADGET THAT COULD CAUSE BLINDNESS

There has been a "disturbing" rise in laser attacks on emergency workers, an air ambulance charity said this week

[Read more](#)

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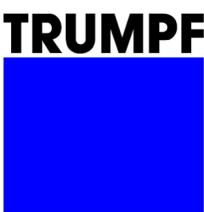


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ICALEO 2023 WRAP UP

By, John McCormack

This year's action-packed and exciting ICALEO was one for the books. We journeyed to the historic Palmer House Hotel in Chicago, Illinois; rich with history, architecture, and a unique energy, which created a space for beautiful events and panel sessions where we all got together to learn, listen, and share new ideas in lasers. We got to see the integration of AI in Laser Processing as its own Track; a thoughtful speech from Dr. Peter Leibinger – this year's Schawlow Award Winner; the interactivity of the Whova app – keeping us all connected throughout the entire conference; and the President's Reception held at SPIN Chicago – a truly electric event where attendees mingled and took part in a tournament where an attendee was declared Ping Pong Champion. We were so happy to see each and every person who made this year's ICALEO an event to remember.

The staple of ICALEO is the program of sessions that take place throughout the week and this year saw tremendous attendance in each and every room. A huge thank you to this year's track chairs and presenters for their thoughtful and innovative lessons. This year's tracks included Macroprocessing, Microprocessing, LAM, Battery Manufacturing, Beam Shaping, Frontiers in Laser Applications, and Artificial Intelligence in Laser Processing and contributed to a very successful week of discussion.

This year also saw a wide breadth of topics in our opening and closing Plenaries, where attendees and peers got to see 5 presentations that are at the forefront of laser innovation and covered topics that will provide food for thought in the advancement of our industry. We got to hear presentations on Quantum Computing, Thermal Laser Epitaxy, Achieving Ignition, Lasers in Battery Production, and Profitable and Certifiable Metal 3D Printing. These topics and their research led to thoughtful discussion and discourse where attendees got to ask questions and join in on the conversation.

Our Awards Luncheon was highlighted by this year's Schawlow Award winner Dr. Peter Leibinger and his gracious acceptance speech. This is the first time a father and son have received the Arthur. L. Schawlow Award – Dr. Berthold Leibinger won the award in 2011 – and being in Chicago where Dr. Peter Leibinger started his career gave a connection to the award and city. We were pleased to present Eric Mottay and Jamie King as new LIA Fellows, Gentec EO as our Steen Award Winner, and David Flamm as the JLA Paper Award recipient.

One of the many amazing things about ICALEO is the connection we make with each other as we share thoughts, research, and raise questions about our industry. This year we brought interactivity and personal connection to a whole new level. The President's Reception – hosted by LIA President Henrikki Pantsar – held at SPIN Chicago was an event that will be remembered for many ICALEO's to come. Everybody in attendance got the opportunity to mingle, network, and play in a ping-pong tournament with professionals and colleagues. The winner, Kay Bischoff, got handed a trophy (as well as bragging rights) at our Closing Plenary. An electric night filled with fond memories, good food, and conversations that will keep our industry professionals and students connected long after the event ends. We truly hope you enjoyed the experience and got to take home one of the LIA ping pong balls.

Our Exhibitor Reception kept the energy going and delivered a night where sponsors, exhibitors, and

attendees could get together to discuss equipment and applications in a relaxed setting after a long day of technical sessions. This night filled with drinks, hors d'oeuvres, and sharing ideas was the perfect way to cap off our second conference day and everyone got the chance to get professional headshots, check out the poster gallery, and continue the ongoing discussions of the conference. Thank you to our sponsors and exhibitors for another great Exhibitor Reception.

The Whova App was another major highlight of the event where everyone involved at the conference got to sign-on, share details about their experiences in Chicago, and spread the joys of ICALEO in a social media experience. And a big congrats to our 1st Social Media App Champ, Gwenn Pallier, for securing the win in a down-to-the-wire race.

And we can't leave the social portion of the write-up without giving a shoutout to the LIA Running Club, hosted and started by ICALEO Chair Klaus Löffler. This year we saw tremendous turnout each and every day for a sunrise run over beautiful Chicago. Thank you, all of the early risers that showed, up for this energizing and day-setting event.

With another successful year wrapped, we look back at our fond memories in Chicago while we look forward to next year in Hollywood, California. We are so excited to see everyone at the Loews Hollywood Hotel in Hollywood November 4-7, 2024 for another thought-provoking and collaborative ICALEO. Join us, be inspired and together let's illuminate the future of our industry. See you all in Hollywood for ICALEO 2024!

Go to <https://icaleo.org/subscribe> if you wish to subscribe for updates about next year's event!



Awards Presented at ICALEO®

Arthur L. Schawlow Award

Outstanding Contribution to Basic and Applied Research in Laser Science and Engineering

The Arthur L. Schawlow Award recognizes outstanding, career-long contributions to basic and applied research in laser science and engineering leading to fundamental understanding of laser materials interaction and/or transfer of laser technology for increased application in industry, medicine and daily life. Examples of fields of contribution include the following in addition to many relevant topics:

- Laser spectroscopy and its application in materials processing and diagnostics
- Laser-aided materials processing
- Laser interaction with biological tissues
- Development of new lasers

The Schawlow honoree will be acknowledged at the LIA Awards Luncheon, during which the recipient will give an address.



2023 Annual Awards Luncheon

LIA Fellows Award

LIA's Most Prestigious Level of Membership

The grade of Fellow is the highest level of membership in the The Laser Institute. It is awarded to recognize members of the institute who have:

- Attained unusual professional distinction in the LIA mission areas of laser science and technology, laser applications and/or laser safety, and
- Provided outstanding service to their field.

Nominations are open to candidates who must have practiced the profession of Laser Science and Engineering in academia, medicine, industry, or government for at least 10 years, and whose membership is current. For exceptional candidates, the Executive Committee may waive the eligibility requirements.



2023 Schawlow Winner: **Prof. Eng. Peter Leibinger**

Peter Leibinger is the Chairman of TRUMPF. In his previous roles at TRUMPF he was responsible for research and development in the TRUMPF Group, new business, the Laser division, the Electronics division, and EUV-Lithography.

After studying mechanical engineering, Leibinger was a development engineer at the Ingersoll Milling Machine Company, USA, from 1997 to 1999. He then joined the family business and, after positions as managing director at various TRUMPF companies, became Vice Chairman of the TRUMPF Management Board.

In addition to holding several chairs at non-profit foundations and voluntary work, he is Chairman of the Supervisory Board of SPRIN-D, the German advanced research projects agency, and the Chairman of the Advisory Board of Deutsche Private Equity (DPE).



2023 LIA Fellows:

Eric Mottay



Jamie King

Journal of Laser Applications (JLA) Best Paper Award

Excellence in Laser Applications Research

The Journal of Laser Applications Best Paper Award is given annually in recognition of outstanding laser applications research to the primary author of a selected paper published in the journal in the preceding three years. Each Editor nominates a single paper in their topical area for consideration by the full Editorial team based on the quality and significance of the work.

The winning author receives free registration to ICALEO and a Crystal Award.

2023 Winner: Daniel Flamm for his submission, “Protecting the edge: Ultrafast laser modified C-shaped glass edges.”

William M. Steen Award

Organizations with Significant Innovation in the use of Lasers for Advanced Materials Processing

The prestigious William M. Steen Award for significant developments in Laser Material Processing is named after one of the early pioneers in the subject. Laser Material Processing is one of the growth points in modern manufacturing. To bring focus to the many developments taking place and to promote the development of new ideas the LIA is making awards for the top idea of the year as adjudicated by a prize giving panel.

In order to qualify, the innovative development should have experimental proof of concept in the use of lasers or monitoring of laser processes and should fit one of the criteria stated below:

- Open a new area of application for lasers.
- Be of benefit to manufacturing with lasers.
- Solve a problem either particular or general by the use of lasers.
- Show some novel sensing system by using optics or when monitoring laser processes.
- A development in photo chemistry.
- A development in photo-therapies.
- A development in 3D printings with lasers

2023 Steen Award Winner:

gentec-eo

Poster Award Contest

Recognizing Poster Presentation

This longstanding ICALEO showcase draws a crowd and inspires plenty of discussion. Join presenters as they answer your questions during the Exhibitor Reception on Tuesday where posters will be displayed. Check the ICALEO proceedings for accompanying manuscripts from presenters who submit them for publication. Posters will be available for viewing throughout the conference and will also be judged by a panel.

1st Place Winner: Daniel Franz

2nd Place Winner: Jeonghun Shin

3rd Place Winner: Kosei Yamamoto

Student Paper Award Contest

Recognizing Student Excellence

Not only does the Student Paper Contest illuminate the great work of up-and-coming researchers, but cash awards will be presented to the first-, second- and third-place winners in each contest. Student papers accepted for competition will be judged by an international panel based on originality of topic/material presented, scientific and technical merit, and presentation quality.

1st Place Winner: Eveline Nicole Reinheimer

2nd Place Winner: Thomas Kaster

3rd Place Winner: Shota Kawabata



Dr. Peter Leibinger Named LIA's 2023 Schawlow Winner

Orlando, FL – October 31, 2023 – The Laser Institute (LIA) is thrilled to announce the recipient of the prestigious Arthur L. Schawlow Award for 2023. This year, the award goes to the esteemed Dr.-Ing. E. h. Peter Leibinger for his outstanding contributions in laser technology, his commercial success, and his accomplishments as an industry leader.

Started in 1982, the Arthur L. Schawlow Award is one of LIA's highest honors, named after the esteemed physicist and laser pioneer, Dr. Arthur Schawlow. This award is presented annually to individuals who have demonstrated exceptional leadership, innovation, and impact within the realms of science and technology.

Dr.-Ing. E. h. Peter Leibinger is widely recognized as a trailblazer and has held several positions as managing director at various TRUMPF companies. He was Chief Technology Officer (CTO) of TRUMPF SE + Co. KG and has been the TRUMPF Supervisory Board Chairman since July. In 2020, Dr. Leibinger was also appointed as co-chair of an expert council to advise the German federal government on the development of quantum computers. These are just some of the remarkable achievements that show his commitment to innovation and how he has become a true leader of industry.

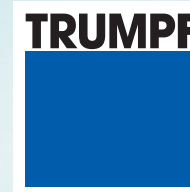
LIA's Executive Director, Gilbert Haas said, "Peter Leibinger has advanced laser technology for decades. His innovative leadership, ardent support, and advocacy of lasers in science, politics and society contribute to the advancement of laser technology and applications worldwide."

The award ceremony honoring Dr.-Ing. E. h. Peter Leibinger took place on Wednesday, October 18 at The Palmer House Hilton in Chicago, IL. During the ceremony, Dr. Leibinger delivered his address entitled "The Laser-TRUMPF Synergy".

LIA extends its warmest congratulations to Dr.-Ing. E. h. Peter Leibinger on this well-deserved recognition.

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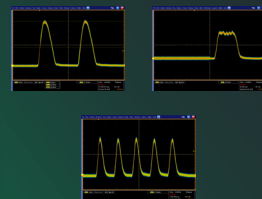
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Dr. Peter Leibinger receiving the Schawlow Award from Mr. Gilbert Haas and giving an address at the Awards Ceremony.



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515 nm

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60 W / 250 μ J

80 W / 500 μ J
120 W / 500 μ J

30 W / 300 μ J
45 W / 300 μ J

50 W / 600 μ J
80 W / 600 μ J

50 W
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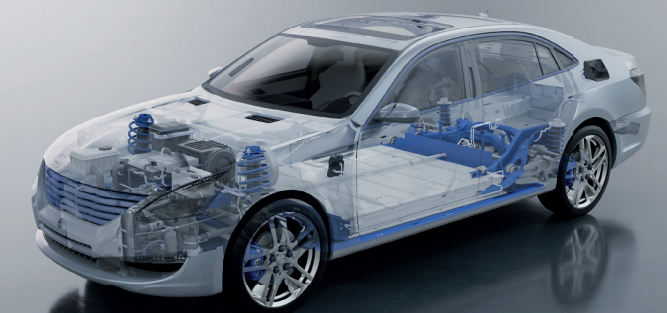
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ICALEO 2023 Sponsorship Dedicated Interview – Amplitude Laser Group



Please introduce yourself and what you do at Amplitude.

Hi, I'm Vincent Rouffiange – VP Sales & Marketing at Amplitude Laser Group.

Amplitude has been a supporter of our ICALEO conference for many years and we appreciate your continued support as our Platinum Sponsor for the conference this year. What motivated your company to become the platinum sponsor for this year's conference?

Indeed, our collaboration with ICALEO and the Laser Institute of America goes back many years. ICALEO is a benchmark conference in the industry and offers an excellent platform to exchange with our peers within the international laser community. The exceptional quality conferences, coupled with business panels and on-site visits, go to the heart of the topic and we are proud to be able to contribute to the latest trends shaping the future of our industry.

Our motivation to become Platinum Sponsor this year aligns with our strategy to reinforce our industry standing and further emphasize our experience and commitment to delivering laser solutions tailored to our customers' specific needs, ensuring a blend of innovation and reliability. We take pride in contributing to the ICALEO conferences and look forward to ongoing collaboration in the years to come.

Can you provide an overview of your company's history and mission?

Amplitude was founded in 2001 and has experienced 22 years of strong growth by consistently innovating to meet evolving market demands. Our focus lies in the development and production of cutting-edge, high performing, reliable and compact ultrafast lasers. Acknowledged in both technological and scientific circles, we have earned multiple prestigious awards.

What aspects of the conference content or audience resonate most with your organization's values and goals?

As we forge ahead in developing cutting-edge higher-energy femtosecond lasers, our focus remains on future technologies and applications where our lasers can significantly impact various industries. Amplitude will take the lead in the Frontiers in Laser Applications track and participate in panel discussions on laser processing, demonstrating our latest technology that heralds a new era in ultrafast manufacturing processes. The potential applications of micromachining with femtosecond lasers in macro-processing environment are boundless, and we firmly believe that the future of ultrafast lasers lies within this domain.

Can you highlight any recent initiatives, products, or innovations within your company that attendees should be aware of?

Amplitude remains at the forefront of the industry by consistently enhancing the average power of our lasers, enabling higher throughput and expanding the possibilities for various applications in both industrial and scientific research sectors. With innovations like our Tangor 300W and the recent prototypes running at 1kW, we are pushing the boundaries even further.

This latest technology offers advanced solutions in macro-processing, enabling the texturing of large surfaces, diversifying applications, and enhancing efficiency and productivity. The possibilities are endless when combining high-power femtosecond lasers such as our Tangor lasers with high repetition rates.

Additionally, our new GHz Burst feature – available with many of our lasers – not only accelerates material removal rates compared to standard femtosecond machinery but also provides the added advantage of controlling the heat-

affected zone. By further increasing the average power of our femtosecond lasers, we can facilitate large scale and large surface processing, such as mold texturing. The expectation is that a car mold can be processed in about 2 hours with a kW femtosecond laser.

Amplitude has recently added a new femtosecond laser to its growing portfolio – the Satsuma X – specifically designed for demanding applications, from multi-purpose machine tools to OLED cutting. It excels in round-the-clock industrial manufacturing and features a robust 50W femtosecond platform delivering high energy (500 µJ), adjustable high repetition rates (up to 40 MHz), fully equipped with the GHz Burst feature.

How do these initiatives relate to the conference's subject matter or industries represented?

Amplitude's latest advancements in ultrafast laser technology for macro-processing will be on display at this year's conference, where we will be leading discussions on frontiers in laser processing and presenting on "Large area femtosecond laser surface texturing for improved aerodynamic performances".

The rise in average energy and the subsequent increase in throughput are truly unlocking new and exciting possibilities across various industries. We eagerly anticipate sharing our insights and ultrafast technologies that make these advancements possible.

Is there anything you think we should watch in the industry going forward?

The future for Amplitude and ultrafast lasers looks very bright. The increased throughput is creating opportunities in new markets like aviation and automotive, redefining the limits of manufacturing efficiency, cost-effectiveness, and heightened productivity.

Thank you so much for your time, insights into the industry, and continued support of ICALEO!



The Satsuma X on display at the Amplitude booth during ICALEO's Exhibitor Reception.



If you are interested in sponsoring a future LIA event, please email marketing@lia.org.

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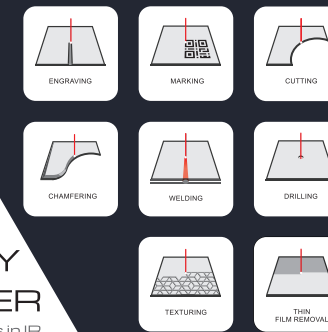
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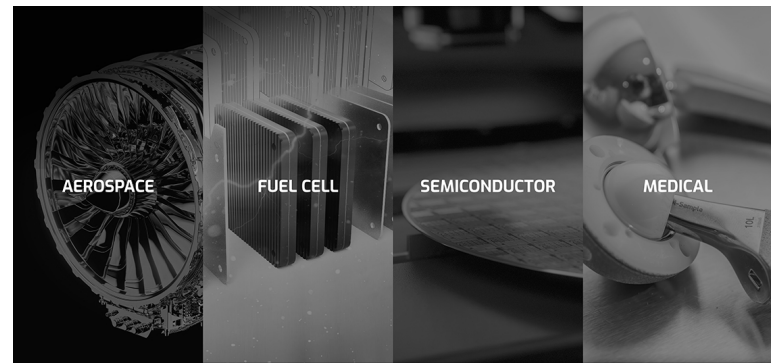
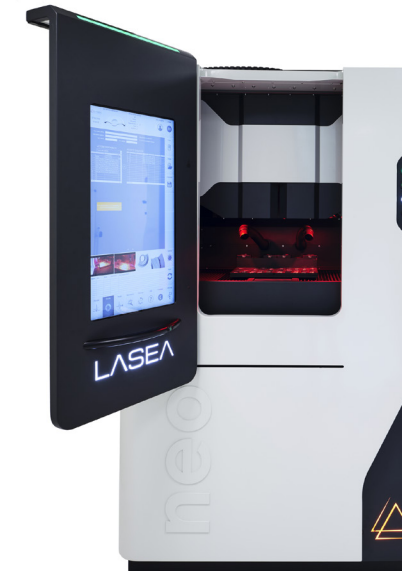


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Vendor Reception: Tuesday, July 16, 2024

Early Bird Ends: March 15, 2024

We appreciate your loyalty. Reserve your sponsorship with \$1000 down by **March 15, 2024** to lock in special pricing!

BENEFITS ALL SPONSORS RECEIVE:

Sponsor recognition throughout conference and at sponsored event/item; a FREE black and white ad in the Technical Digest and full color ad in the Advance Program and LIA Today (1/4 page Silver; 1/2 page Gold; Full page Platinum); social media promotion; and MORE!

All sponsors receive a tabletop at the Exhibitor Reception with the opportunity to upgrade to a 10x10 booth!

Sponsorship Levels

Platinum

~~\$8,000~~ **\$7,500 SOLD**

Overall Conference Sponsor

Gold

~~\$6,500~~ **\$6,000**

Choices: Choice of Attendee Gift, Welcome Reception, Sponsor Reception, or Conference Bags

Silver

~~\$5,000~~ **\$4,600**

Choices: Lanyards, Conference Program, or Afternoon Snack Breaks

Bronze

~~\$4,000~~ **\$3,700**

Choices: Morning Coffee Breaks or Panel Discussions

Exhibit Only

~~\$3,000~~ **\$2,700**

Members receive an additional discount.

Presented by:



SAVE THE DATE:

July 15-17, 2024

Marriott at the
University of Dayton
Dayton, OH USA