

CELEBRATING
30 YEARS

LASERS & PHOTONICS
MARKETPLACE
SEM^{INAR}[®]

Presented by **LaserFocusWorld**

MONDAY AT SPIE PHOTONICS WEST

JANUARY 29, 2018

MARRIOTT MARQUIS, SAN FRANCISCO, CA • MARKETPLACESEMINAR.COM/2018

ANALYZING THE BUSINESS OF PHOTONICS



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European Photonics Industry Consortium

\$1,000 DISCOUNT!
Attendees of the 2018 Lasers & Photonics Marketplace Seminar receive a \$1,000 discount off of the full Strategies Unlimited 2018 Worldwide Lasers & Photonics Report. — **Attending the conference pays for itself!**

Succeeding in global markets is an especially tall order for photonics businesses—it means balancing ever-changing economic forces, technology developments, and emerging applications. I believe that the Lasers & Photonics Marketplace Seminar remains the one place where you can network and process all these developments, and try to understand the implications for your business.

This year we've expanded our format of interviews and small panel discussions so that you can hear direct answers to your questions, and glean insights you might not get in a PowerPoint presentation. For example, I'll be interviewing laser market analyst Allen Noguee after his formal presentation on global laser markets. And after lunch, I'll be on stage talking to Chuck Mattera, president and CEO of II-VI Incorporated, which makes products that impact most photonics applications and markets.

In a reprise of a notable 2014 panel, Martin Seifert, now with Booz Allen Hamilton, returns to hold an extended conversation with Peter Leibinger of Trumpf, Sri Venkat of Coherent, and Basil Garabet of NKT Photonics. And in the afternoon, Barbara Gefvert, chief editor of *BioOptics World*, will hold a discussion on the needs of bioinstrumentation makers with Muhammad Al-Qaisi of Alcon, Wenyi Feng of Illumina, and Jochen Straub of Carl Zeiss Meditec. Preceding her, we'll have a technology and market talk on the hot topic of photobiomodulation by Praveen Arany from the University of Buffalo.

For informative and engaging presentations, you will also hear from Scott Keeney of nLight on the future of high-power laser diodes, Bo Gu of Bos Photonics on new changes coming to Chinese laser markets, and John Dexheimer of LightWave Advisors on a realistic view of company valuations.

Join us at the 30th annual Lasers & Photonics Marketplace Seminar—you can register online at www.marketplaceseminar.com. If you have any questions, please contact me directly at cholton@pennwell.com. I hope to see you there and at our Networking Reception following the event.



Best wishes,

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MEDIA SPONSORS

The Lasers & Photonics Marketplace Seminar was developed in 1988 by Laser Focus World's former editor in chief Steve Anderson. The seminar developed organically, out of a need for marketplace research developed for executives at leading photonics companies. The seminar continues to be supported by *Laser Focus World*, *BioOptics World*, and *Industrial Laser Solutions*.

Laser Focus World – *Laser Focus World* is a global resource for engineers, researchers, scientists and technical professionals providing comprehensive coverage of optoelectronics and photonics technologies, applications, and markets.

Industrial Laser Solutions – *Industrial Laser Solutions* provides global coverage of industrial laser materials processing and technology, educating subscribers in ways that improve their profitability.

Strategies Unlimited – Specializing in market research reports, custom studies, and newsletters, *Strategies Unlimited* adeptly integrates technology and business issues. With its in-depth understanding of market applications, technology developments, industry participants, and government policies, the company is renowned for its outstanding record in market forecasting.

BioOptics World – *BioOptics World* delivers timely news and expert, in-depth technical and applications information on optics and photonics technologies applied to biomedicine and other life sciences.



ANALYZING THE BUSINESS OF PHOTONICS

WHY ATTEND?

THE LASERS & PHOTONICS MARKETPLACE SEMINAR is the only event anywhere in the world that focuses on the entire laser marketplace. It provides a comprehensive market perspective on all of photonics that is unobtainable elsewhere. The market data provided is derived from the 2018 Lasers & Photonics Worldwide Report—not to be published until February 2018. Data from the industry's leading sources is segmented by application and laser technology, allowing executives to understand the implications for their niche industry. In addition to this valuable marketplace analysis, the day features speakers and panelists covering the most important emerging trends and opportunities.

HELD THE MONDAY BETWEEN SPIE BIOS AND SPIE PHOTONICS WEST — An opportune moment, when the exhibit floors are closed and many the leading lasers and photonics companies and their executives in the same area. The seminar is located at the Marriott Marquis, just a quick walk from Moscone Center. The agenda packs marketplace reporting, emerging technologies, networking, and executive content into a one-day event designed for executives. Now in its 30th year, the annual seminar provides photonics industry decision-makers and stakeholders with market information and analysis, a look at emerging opportunities, and a forum for networking.

WHO WILL ATTEND?

THIS EVENT IS INTENDED FOR business leaders and key players at photonics manufacturers and their suppliers, as well as anyone with a stake in the business of photonics, such as technology analysts and investors. Our attendee audience profile includes:

- Presidents, CEOs, and COOs
- Chief Technology Officers
- R&D Management
- Sales and Marketing Executives
- Business Development Directors
- Managing Directors
- Business/Technology Analysts

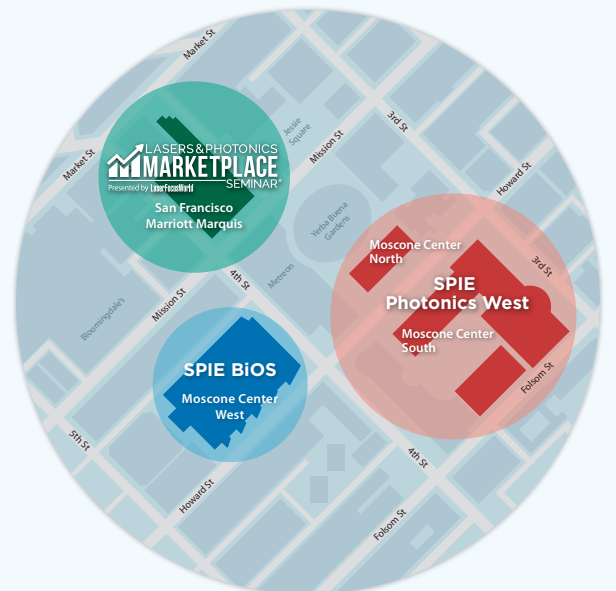
LOCATION

SAN FRANCISCO MARRIOTT MARQUIS
55 Fourth Street, San Francisco, CA
Tel: 415-896-1600
www.marriott.com

HELD MONDAY DURING SPIE. PHOTONICS WEST BIOS EXPO

JANUARY 27-FEBRUARY 1, 2018

The industry's most influential conference and exhibition covering all aspects of biophotonics, lasers, optics, and imaging.



SEMINAR AGENDA

7:00AM - REGISTRATION AND CONTINENTAL BREAKFAST

8:00AM – WELCOME AND INTRODUCTION



Conard Holton
Editor in Chief/Associate Publisher
Laser Focus World

8:10 – 8:45AM – KEYNOTE TALK: THE PAST, PRESENT, AND FUTURE OF HIGH-POWER LASER DIODES



Scott Keeney
President & CEO
nLight

Abstract: The laser diode is unmatched for its high efficiency in converting electrical input energy into light output. Laser diodes can be made to produce extremely high optical powers and as the technology has improved markets have expanded in industrial, medical, entertainment, military, and scientific applications. Scott Keeney, founder of nLight, will show how this essential laser technology has developed and what we can expect in the future. In doing so, he will review the history, the technology, and the role of optics and delivery options. His primary focus will be on the business side of developments in high-power laser diodes, and the impact they may have as they displace other technologies and create new markets.

8:45 – 9:30AM – GLOBAL LASER MARKETS: INSIGHTS AND FORECASTS



Allen Noguee
Laser Analyst
Strategies Unlimited

Abstract: Allen Noguee will again present the macroeconomic forces at work, supplier trends, and technology developments in the worldwide laser markets. His talk will provide a global market review and forecast of laser revenues by product and application, including industrial lasers and applications, communications, lithography, defense and security, sensing, additive manufacturing, and medical, and he will look ahead with insights gained from his research in specific market niches. New this year, Conard Holton will join Allen for an onstage discussion and Q&A session. The session will fuse input that Conard receives throughout the year with the analytical data presented by Allen, plus questions and comments from the audience.

9:30 – 10:00AM – CONVERSATION WITH EDITOR IN CHIEF CONARD HOLTON

10:00 – 10:30AM – NETWORKING BREAK



10:30 – 11:00AM – POLICY & PRACTICE: CHANGES IN THE CHINESE LASER MARKETS



Bo Gu, PhD
Bos Photonics

Abstract: The Chinese economic engine continues to churn as the consumer markets rev up and the government backs aggressive plans to support the country’s homegrown laser industry, including programs like Made in China 2025 and Internet+. In addition, some Chinese laser companies are becoming significant exporters. Dr. Gu will again try to answer questions of how these changes are impacting the Chinese laser market, international laser companies doing business in China, and international competition for laser sales. He will focus mainly on industrial applications and markets, and provide official data about market developments from the Chinese Optical Society.

**11:00 – 12:15PM – EXECUTIVE PANEL: GLOBAL LASER MARKETS AND TECHNOLOGY TRENDS
—WHAT IS HAPPENING AND WHAT TO EXPECT**

With global markets constantly changing and new applications and customers appearing, we bring together senior executives from several of the leading laser companies in the world to provide their perspectives on current markets, views on different technologies, and opinions about future challenges and opportunities for manufacturers and integrators of lasers and photonics products.

MODERATOR:



Martin Seifert
Executive Advisor
Booz Allen Hamilton

PANELISTS:



Basil Garabet
President and CEO
NKT Photonics



Peter Leibinger, PhD
Vice Chairman and CTO
TRUMPF GmbH



Sri Venkat
Senior Vice President & General Manager
High Power Fiber Lasers & Global CO₂ Lasers
Coherent

12:15 – 1:30PM – NETWORKING LUNCH

SEMINAR AGENDA

1:30 – 2:20PM – KEYNOTE DISCUSSION: A CONVERSATION WITH CHUCK MATTERA, II-VI INCORPORATED



Chuck Mattera, PhD

*President & CEO
II-VI Incorporated*

Abstract: Dr. Chuck Mattera will talk with Editor in Chief Conard Holton about the optics, lasers, advanced materials, and markets that define the role of II-VI Incorporated in the photonics marketplace. The conversation will explore Dr. Mattera's views on the different applications that are now driving photonics markets, including industrial processing, optical communications, defense, life sciences, and semiconductors. They will discuss the competitive landscape for optics and laser manufacturers, and the opportunities for new technologies and products. And they will also visit subjects such as II-VI's long-term growth strategy, including acquisitions and global markets.

2:20 – 2:50PM – COMPANY VALUATIONS & MARKETS: UNICORNS VS. AVERAGES AND THE WALKING DEAD



John Dexheimer

*President
LightWave Advisors*

Abstract: The business and investment environment for photonics companies is fragmented and competitive, and presents a healthy overall financial picture that obscures the dynamics of each niche market and each company serving that market. John Dexheimer, a long-time investor, advisor, and board member of photonics companies, will present his analysis of the real state of affairs relative to the valuations of public and private companies, and what these valuations might mean for executives and investors in photonics. His goal is to provide a behind the scenes, real-world view of deal/price evolutions—including the good, bad, ugly outcomes—and how to work the market and personal dynamics that executives and investors will face.

2:50 – 3:20PM – NETWORKING BREAK

3:20 – 3:50PM – TRENDS AND NEEDS IN PHOTOBIMODULATION THERAPY



Praveen Arany DDS, PhD

*Assistant Professor, Oral Biology & Biomedical Engineering
School of Dental Medicine, Engineering & Applied Sciences
University at Buffalo*

Abstract: Photobiomodulation (PBM) therapy is revolutionizing health care, with new applications varying from hair regrowth to treating post-traumatic stress disorder (PTSD) and quickly healing wounds. Researchers and investors are beginning to understand the biological mechanisms involved and the potential to transform health care. Dr. Praveen Arany is a leading researcher in this field. Besides being the immediate past-president of the North American Association for Photobiomodulation Therapy and current president-elect of the World Association for Laser Therapy, he plays key roles in promoting PBM therapy in SPIE and OSA. His roles have provided much insight into both the underlying science and the growing market opportunities. His talk will include a discussion of existing and potential applications, market size, and companies in the field. He will also present a wish list of photonics devices that could advance the field, and a view of where it will be in a few years.



3:50 – 5:00PM – TECHNOLOGY AND MARKETS PANEL: WHAT BIOINSTRUMENTATION DEVELOPERS NEED FROM THE PHOTONICS INDUSTRY

Abstract: Bioinstrumentation equipment makers will discuss advances in capabilities enabled by light sources, sensors, optical components, and other photonics/optics tools—and what they see for the future, including research and clinical trends, and unmet customer needs. Panelists are engineering executives or business development managers from OEMs and end users.

MODERATOR:



Barbara Gefvert
Editor in Chief
BioOptics World

PANELISTS:



Muhammad Al-Qaisi, PhD
Associate Director, R&D
Alcon, A Novartis Division



Wenyi Feng, PhD
Principal Engineer
Illumina



Jochen Straub, PhD
Director, Advanced
Technology & Concepts
Carl Zeiss Meditec
Jena, Germany

5:00–6:30PM – NETWORKING RECEPTION

PREVIOUS ATTENDEES INCLUDE EXECUTIVES FROM THE FOLLOWING COMPANIES & ORGANIZATIONS:

- | | | | | |
|---------------------------|---------------------------|----------------------------|-------------------------|-----------------------------|
| A.T. KEARNEY | CONVERGENT PHOTONICS | HAMAMATSU | MKS INSTRUMENTS | QUANERGY SYSTEMS |
| AIM PHOTONICS | CORACTIVE HIGH-TECH | HERAEUS QUARTZ AMERICA | NECSEL | QUANTEL |
| ALCON | CROSSROADS PHOTONICS | HUACHUAN SECURITIES | NEWPORT | RAYMOND JAMES FINANCIAL |
| ALTECHNA UAB | DTU FOTONIK | IDEX HEALTH & SCIENCE | NEWPORT SPECTRA PHYSICS | SKORPIOS TECHNOLOGIES |
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| AMERICAN PHOTONICS | EKSPLA | INCUBIC MANAGEMENT | NKT PHOTONICS | SPI LASERS |
| AMPLITUDE SYSTEMES | ELECTRA-OPTICS TECHNOLOGY | INRAD OPTICS | NLIGHT | SYNRAD |
| AUBERT ASSOCIATES | ENERGETIQ TECHNOLOGY | INTEL | NORTHROP GRUMMAN | THALES OPTRONIQUE |
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| BAIN & COMPANY | ESI | JAPAN LASER | OEM CAPITAL | THORLABS |
| BARCO | ETH ZURICH | JENOPTIK | OEWAIVES | QUANTUM ELECTRONICS |
| BARON CAPITAL | FABRINET | KINETIC RIVER | OFS FITEL | TOPTICA PHOTONICS |
| BLM GROUP | FIBERGUIDE INDUSTRIES | KLA TENCOR | OPHIR PHOTONICS GROUP | TRILUMINA |
| BRISTOL INSTRUMENTS | FICONTEC GMBH | LASER INSTITUTE OF AMERICA | OPTIMAX | TRUMPF |
| BWT BEIJING LTD. | FOCUSLIGHT TECHNOLOGIES | LASER MECHANISMS | OSRAM GMBH | U.S. AIR FORCE RESEARCH LAB |
| BYSTRONIC GROUP | FRAUNHOFER ILT | LASERTEL | PALOMAR TECHNOLOGIES | UNITED LENS |
| CAMBRIDGE TECHNOLOGY | G-S PLASTIC OPTICS | LAWRENCE LIVERMORE | PARADIGM LASER RESEARCH | USHIO |
| CARDINAL OPTICS | GE CRITICAL POWER | NATIONAL LABORATORY | POWER TECHNOLOGY | VEECO |
| CERES TECHNOLOGY ADVISORS | GE GLOBAL RESEARCH | LIGHTWAVE ADVISORS | PRECITEC | VI SYSTEMS |
| COBOLT | GOOGLE | LONGBOW RESEARCH | PRECO | WELLMAN CTR FOR PHOTOMED |
| COHERENT | HALLIBURTON TECHNOLOGY | LUMENTUM | PRINCETON LIGHTWAVE | ZEMAX |
| | HALMA PLC | MASIMO SEMICONDUCTOR | | ZYGO CORPORATION |

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JANUARY 29, 2018

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