



**WCLI®**

# 2024 INTERNATIONAL SYMPOSIUM

OCTOBER 5-6, 2024 ✦ SHANGRI LA DUBAI ✦ DUBAI, UNITED ARAB EMIRATES





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# THE WORLD CLINICAL LASER INSTITUTE

The World Clinical Laser Institute is a close-knit network of thousands of dental professionals who share a passion for improving the patient experience and building the best possible practice. We welcome you to this exciting symposium event and are excited to share our unique blend of education, fellowship and fun while learning about the latest trends in laser dentistry.



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# SHANGRI LA DUBAI

Shangri-La Dubai is an ideal starting point from which to discover the city's dynamic energy, where modern architecture stands side-by-side with traditional souk markets. Strategically located on Sheikh Zayed Road, minutes away from Dubai Mall and City Walk, the hotel offers spacious rooms with stunning views of the ever-evolving skyline or the Arabian Sea. Asian-inspired dining options and a pool offering unobstructed views of the Burj Khalifa complete the experience.



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## ENDODONTICS

## DR. YASUHIKO KAMURA ✦ USA

Dr. Yasuhiko Kamura, with a Doctorate of Dental Surgery (D.D.S) from Tokyo Medical and Dental University in 2010 and a Certificate in Endodontics from Columbia University College of Dental Medicine in New York in 2017, is a Diplomate of the American Board of Endodontics. His dedication to excellence in his field is evident through his exceptional knowledge and skill, ongoing professional development commitment, and steadfast dedication to delivering the highest standard of patient care. Dr. Kamura's contributions extend to textbooks and numerous scientific papers in the field of endodontics. In his leisure time, he indulges in scuba diving and surfing, reflecting his well-rounded approach to life and commitment to excellence in all pursuits.

***Illuminating Endodontics: The Revolutionary Role of YSGG Lasers in Endodontics***

Laser technology is revolutionizing endodontics, bringing a new level of precision and effectiveness to root canal therapy. This presentation will illuminate the significant advancements lasers have introduced, including superior disinfection, enhanced procedural accuracy, and improved patient comfort. We will explore the intricacies of how lasers interact with dental tissues, compare their benefits to traditional techniques, and highlight recent research breakthroughs. Looking ahead, we'll also delve into the exciting realm of regenerative therapies, where stem cell research and tissue engineering are paving the way to restore natural tooth function. Through engaging case studies, this session aims to empower dental professionals with cutting-edge knowledge and techniques to elevate patient care and drive the future of endodontic practice.





PERIO/  
IMPLANTOLOGY

## DR. ROBIN HORTON ✦ UK

Robin Horton, BDS is the owner of Wayside Dental Practice in Harpenden, United Kingdom. Dr. Horton has been using dental lasers in his practice for over 20 years, in all aspects of his practice. His practice employs three Waterlase all tissue lasers as well as five diode lasers.

Dr. Horton specializes in laser-assisted complex implant dentistry, utilizing digital technology. Dr. Horton is a Nobel Biocare instructor in digital implant dentistry, lecturing internationally on the subject. Dr. Horton is a keen road cyclist, an avid Arsenal Soccer Club, and England Cricket fan.

### *The YSGG laser, a Versatile and Essential Tool at Every Stage in Implant Dentistry*

I use the YSGG laser at every stage of implant dentistry. The multiple uses start with the laser as a periotome, a debriding tool, and a disinfection tool, for a much more predictable and gentle extraction preserving the bony housing. For the implant placement it is used instead of a scalpel and to decorticate the socket, and to gently shape the socket and soft tissues to the pleasing anatomy we desire. For the final uncovering and intra oral scans I use it for a bloodless field and atraumatic tissue plasty, and even at the final fitting I use it to aid crown seating and papillae contouring. Lasers have a healing aspect to them. The YSGG has a PBM effect (QPBM) of its own, and I also use a 940 nm diode laser at each stage for its PBM effect. The presentation will also show that the YSGG laser is a highly effective, minimally invasive tool to treat peri-implantitis completely.-



COSMETIC DENTISTRY

**DR. MANAF TAHER AGHA ✦ UAE**

Dr. Manaf Agha received his DDS at Aleppo University with post-graduate studies in periodontology, has a Mastery of Laser Dentistry from Vienna University, and is the former head of the Practice and Licensure Committee of the Aleppo Branch of the Syrian Dental Association. He is also the former Chairman of the Scientific and Research Committee of the Academy of Laser Dentistry (ALD) in the US, as well as Co-Founder and former Secretary General of the International Academy for Laser Education in Vienna, Austria. Dr. Agha currently is a private practitioner based in Dubai, UAE. He is the President of the Academy for Laser Education (ALE), UAE branch, Head of the Laser Research Unit at Ajman University, UAE since 2007, teaching laser and modern technology for 5th year and post-graduate students, and an ALD Speaker Bureau Member. In addition to being an international lecturer, Dr Agha has also published numerous papers on laser dentistry.

***Laser Techniques in Oral Melanin Depigmentation***

Laser oral melanin depigmentation is a minimally invasive procedure gaining prominence in cosmetic dentistry. This lecture provides a comprehensive overview of the principles, techniques, and benefits of using laser technology for the depigmentation of melanin-rich oral tissues. We will explore the types of lasers commonly used, their mechanisms of action, and the clinical protocols for safe and effective treatment. Additionally, the session will address patient selection criteria, potential complications, and post-procedure care. By the end of this lecture, attendees will have a clear understanding of how laser technology can be effectively applied to enhance the esthetics of the oral tissues.



**DR. PANG NING CHUANG** ✦ TAIWAN

Dr. Chuang is a specialist of Taiwan Academy of Periodontology. His solid training background in periodontal treatment led him to read a large amount of literature and apply it in daily clinical treatment after being exposed to laser. He is especially committed to minimally invasive periodontal treatment with adjunctive use of laser. Today, He has been using the Er,Cr:YSGG all tissue laser to treat periodontal disease for ten years, and even developed a novel procedure: LAMINST(laser-assisted minimally invasive nonsurgical therapy), which was published in IJPRD in 2023. He also founded a continuing education institution and is the leader in laser courses in Taiwan.

**PERIODONTICS*****LAMINST: a Novel Approach for Treating Severely Periodontally Compromised Teeth with Adjunctive Use of Laser and Microscopes***

The idea of minimally invasive nonsurgical treatment (MINST) is to remove the etiology with minimal damage to the healthy periodontium and provide the ideal healing environment. The novel protocol of laser-assisted minimally invasive nonsurgical therapy (LAMINST) has been introduced in IJPRD that combines the benefit of minimally invasive and the dental laser to maximize the therapeutic potential. Furthermore, LAMINST not only becomes an alternative to surgery to treat severe periodontitis but also has the prospects for treating peri-implantitis.



## ORAL BIOLOGY

### DR. PRAVEEN ARANY ✨ USA

Dr. Arany trained as a dentist, oral pathologist, and biomedical engineer. He served as an Assistant Clinical Investigator at NIDCR/NIH, Bethesda, from 2012 to 2015. He is currently an Associate Professor at University at Buffalo, NY. He has over 125 scientific publications and received numerous awards, such as the National Institutes of Health Young Investigator, American Society for Lasers in Surgery and Medicine's Horrace Furomoto and Wound Healing Society's Young Investigator award. He has been invited to speak in various national and international forums, reviews for over 75 scientific journals, serves on nine journal editorial boards, including associate editor in four, and reviews grants for national and international funding agencies.

He is the immediate past-President of the World & North American Association for Photobiomodulation Therapy and Chair of PBM groups in SPIE and Optica (OSA). He has 6 patents, over 125 scientific publications with over 7300 citations, and an h-index of 35. His work has been featured in many mainstream media highlights in over 70 countries.

#### *Role for 940 nm in Photobiomodulation Therapy*

There have been tremendous recent progress in the Photobiomodulation (PBM) field that is poised to revolutionize human health and wellness. Several tangible recent milestones include the recognition of PBM as a discrete form of light therapy by the United States Food and Drug Administration and the American Dental Association. A major advance has been the publication of systematic reviews and meta-analyses by the Multinational Association of Supportive Care in Cancer (MASCC), the International Society for Oral Oncology (ISOO), and the World Association for Photobiomodulation (WALT). These papers by global experts rigorously analyzed data from 35 randomized, blinded human studies that concluded that there is clear evidence for recommending the routine use of PBM therapy to prevent and treat cancer treatments-induced oral mucositis. While the clinical evidence for PBM is unequivocal, there remain several questions on the precise dosing and mechanism. This presentation will provide a brief overview of the recent advances in our understanding of molecular mechanisms including therapeutic and safety biomarkers. A novel approach to PBM dosing using individual wavelength photon energy, termed Photonic Fluence and Einstein will be outlined. This approach enables the extension of PBM from the conventional wavelengths, red 660 nm and near-infrared 810 nm, to other wavelengths, especially the 940 nm. Results will be presented with discrete responses evoked by these wavelengths for optimal future development of clinical protocols.





COSMETIC DENTISTRY

## DR. IBRAHIM SAMIR ✦ EGYPT

Dr. Ibrahim received his bachelor's degree of Oral and dental medicine (B.D.S) from Misr International University in Cairo – Egypt. He accomplished his Mastership of Laser Therapy in Dentistry program in Aachen Dental Laser Center (AALZ), RWTH Aachen University – Germany in 2016. Also successfully certified as a laser safety officer from (AALZ) in 2016. He became a fellow of World Academy for Laser Education in Dentistry (WALEd) in 2016 and a member of International Society for Laser Dentistry (ISLD) organization since 2019.

Dr. Ibrahim successfully inaugurated the dental laser center of DR. Nour dental clinics in Cairo, Egypt and he is the director of this dental laser center since 2017. He has been practicing laser dentistry since 2017 and specialized in dental esthetical treatments utilizing laser technology.

Dr. Ibrahim initiated a laser dentistry continuing educational program in Dr. Nour Academy in 2020, training 30 candidates yearly. He shares knowledge in laser science as a speaker with colleagues on a yearly basis in the ISLD congress.

### *Aesthetic Laser Dentistry, from Millennials to Gen Z*

In the 20th century, Gen Z has become increasingly demanding when it comes to cosmetic dentistry. Regarding cosmetic dentistry, laser dentistry has become increasingly important. Therefore, in order to provide your patients with the finest aesthetic results, you need to learn more about integrating and using the newest laser technology in your dental office.

In this lecture we will discuss the laser aesthetic soft tissue management in terms of aesthetic periodontal principles, lasers types and techniques. Also we will unveil the secrets of laser veneers debonding in terms of laser biophysical interaction, concept of debonding, techniques and parameters.



FACIAL ESTHETICS

## DR. PETER HARNOIS ✦ USA

Dr. Peter Harnois has been practicing general and aesthetic dentistry in the Hinsdale, IL community for over 38 years. He graduated with honors from the University of Illinois at Chicago College of Dentistry in 1982 where he served as class president for 3 years. He was an assistant professor of Oral Diagnosis from 1983-1989. He is the President of the Illinois Chapter of the American Academy of Facial Esthetics and a member of the American Academy of Cosmetic Dentistry, The World Clinical Laser Institute, The American Dental Association, The Illinois State Dental Society and The Chicago Dental Society. He is also a Diplomat and faculty member of the American Academy of Facial Esthetics. Dr. Harnois is an internationally recognized lecturer known for his coherent and interactive style to deliver the message. He strives to educate and train others in an open forum with active discussion and shares insights gained after troubleshooting hundreds of treatments with varied case scenarios. He lectures for Biolase, NuCalm, the AAFE on Botox and Dermal Fillers and Den-Mat on Minimally Invasive Smile Design technologies. He also lectures for several of the Terec lab members across the country on Emerging Technologies in Dentistry and has live Over The Shoulder courses at his Hinsdale office utilizing these technologies.

### *The Evolution of Fractional Laser Skin Resurfacing Utilizing a Water-based minimally invasive 2780 nm Er,Cr:YSGG Laser*

Laser resurfacing is a very popular procedure worldwide. Full field and fractional lasers are used in many aesthetic practices. There have been significant advances in laser resurfacing in the past few years, which make patient treatments more efficacious and with less downtime. Erbium and carbon dioxide and ablative, nonablative, and hybrid fractional lasers are all extremely effective and popular tools.

Fractional photothermolysis, an approach to laser skin resurfacing that creates microscopic thermal wounds in skin separated by islands of spared tissue, was developed to overcome the high incidence of adverse events and prolonged healing times associated with full coverage ablative laser procedures.

This minimally invasive 2780 nm Er,Cr:YSGG laser wavelength with water specifically targets the water in the epithelial cells in the epidermis. Proven wavelength leads to effective full-face treatment while reaching the dermis layer. Diffractive, micro optics lens array delivers 10 microbeams in a single line per laser pulse for ablative and non-ablative skin resurfacing. Patient comfort during treatment is easily achieved by using a topical cream for 15 minutes prior to treatment. Greatly reduced risk of complications compared to more invasive procedures.

A fractional laser treatment is a type of laser skin resurfacing procedure that targets a portion (or fraction) of skin at a time. This targeted area is subjected to tiny zones of laser energy, which work to penetrate into the second layer of skin, the dermis. The Waterlase Fractional Handpiece uses an advanced Er,Cr:YSGG laser and water atomization technologies to ablate-reshape soft tissues and skin, resulting in faster healing and recovery time with minimal trauma and maximum efficacy.



**PEDIATRIC DENTISTRY****DR. MARINA JANSSEN ✦ NETHERLANDS**

Dr. Marina Janssen is an accomplished dentist, originally from Brazil, who earned her Bachelor's degree in Dentistry from the Faculty of Dentistry of Pernambuco (FOP) in Brazil in 2006, she further honed her expertise by completing a Master's degree in Dentistry in Portugal at CESPU in 2010. In 2017, she established her private dental practice in Hoorn, North Holland, the Netherlands, where she became a trailblazer in the application of laser technology within dentistry. Her commitment to advancing the field led to prestigious achievements, including the Mastership in Lasers in Dentistry in 2021 and a Master of Science in Lasers in Dentistry in 2022, both from the RWTH University in Aachen, Germany.

***YSGG Laser-assisted Lactation Support***

Laser-assisted lactation support is an approach that combines the latest advancements in technology with a deep understanding of suction physiology. Recognizing the impact of oral tethered tissues on suckling difficulties is crucial in providing effective support for lactation issues. Additionally, postoperative wound care and the surgical techniques utilizing the Er,Cr:YSGG 2780nm laser are essential components of this innovative approach. Join us to learn more about how laser technology is revolutionizing lactation support for mothers and infants.



## RESTORATIVE DENTISTRY

### DR. MARINA POLONSKY ✦ CANADA

Dr. Marina Polonsky graduated from the University of Toronto, Canada in 1999, with the Dean's Gold Medal of Achievement and maintains a private general practice in Ottawa, Canada, with focus on multi-disciplinary treatment utilizing lasers of different wavelengths.

Dr. Polonsky holds a Mastership with WCLI (World Clinical Laser Institute), Master of Science in Lasers in Dentistry degree from RWTH University in Aachen, Germany. She is a recipient of Mastership Certificate with ALD (Academy of Laser Dentistry) and is a recognized member of the ALD Speaker Bureau. Dr. Polonsky is a founder of the Canadian Dental Laser Institute (CDLI), an organization dedicated to providing quality continuing education in Laser Dentistry in Canada. CDLI is the only ALD affiliated international study club in Canada.

Dr. Polonsky is actively involved in the educational aspect of dental laser technology by teaching laser safety courses, Diode and Erbium certification courses, as well as lecturing world-wide on laser-assisted dentistry. She is a key opinion leader (KOL) and a Clinical Mentor for Biolase Technologies Inc. and has been involved in the development of the newest all-tissue laser system, Waterlase Express. Dr. Polonsky is the author of multiple scientific papers, reviews and case reports on the uses of lasers in dentistry, she is the chief editor for JLAD (Journal of Laser-Assisted Dentistry) and a peer-reviewer for LIDS (Lasers in Dental Science) by Springer. Since 2017, Dr. Polonsky has become the Chief Editor of Laser Dentistry issue of the Oral Health Journal and is a member of the Executive Committee of Oral Health.

#### *From Transmission to Absorption: A Laser Journey through Dental Ceramics*

This lecture is designed to explain laser-tissue interactions necessary for the successful debonding of crowns and veneers and to dive into the research showing what contributes to variations in the success of this popular procedure. Laser parameters, focal distance, delivery methods, types of cement, and ceramics used, all working together. This lecture will demystify the process to ensure a successful outcome every time.



## SATURDAY, OCTOBER 5, 2024 ✦ AL NOJOOM BALLROOM

<b>7:30 - 8:30</b>	<b>REGISTRATION</b>
8:30 - 8:40	Dr. Marina Polonsky (Canada) <b><i>Opening Event &amp; Welcome Address</i></b>
8:40 - 10:10	Dr. Yasuhiko Kamura (United States) <b><i>Illuminating Endodontics: The Transformative Power of Laser Technology</i></b>
<b>10:10 - 10:30</b>	<b>BREAK</b>
10:30 - 11:50	Dr. Manaf Agha (United Arab Emirates) <b><i>Laser Techniques in Oral Melanin Depigmentation</i></b>
11:50 - 13:10	Dr. Praveen Arany (United States) <b><i>Role for 940 nm in Photobiomodulation Therapy</i></b>
<b>13:10 - 14:20</b>	<b>LUNCH — AL BADER BALLROOM</b>
14:20 - 15:40	Dr. Peter Harnois (United States) <b><i>The Evolution of Fractional Laser Skin Resurfacing Utilizing a Water Based Minimally Invasive 2780 nm Er,Cr:YSGG Laser</i></b>
<b>15:40 - 16:00</b>	<b>BREAK</b>
16:00 - 17:10	Dr. Pang Ning Chuang (Taiwan) <b><i>LAMINST: A Novel Approach for Treating Severely Periodontally Compromised Teeth with Adjunctive Use of Laser and Microscopes</i></b>
17:10 - 18:00	Laser Physics Review for Associate Fellowship Examination (Optional)
<b>18:00 - 19:00</b>	<b>COCKTAIL HOURS</b>
19:00	Gala Dinner — Ali Bader Ballroom



OCTOBER 5-6, 2024 ✦ DUBAI, UNITED ARAB EMIRATES

## SUNDAY, OCTOBER 6, 2024 ✦ AL NOJOOM BALLROOM

7:30 - 8:30	Associate Fellowship Examination (Optional)
8:30 - 8:40	Dr. Marina Polonsky (Canada) <b><i>Second Day Opening Remarks</i></b>
8:40 - 10:10	Dr. Robin Horton (United Kingdom) <b><i>The YSGG laser, a Versatile and Essential Tool at Every Stage in Implant Dentistry</i></b>
<b>10:10 - 10:30</b>	<b>BREAK</b>
10:30 - 11:50	Dr. Marina Janssen (Netherlands) <b><i>YSGG Laser-assisted Lactation Support</i></b>
<b>11:50 - 13:10</b>	<b>LUNCH — AL BADER BALLROOM</b>
13:10 - 14:10	Panel Discussion (Dr. Peter Harnois, Dr. Manaf Agha, Dr. Robin Horton) Moderator: Dr. Ibrahim Samir <b><i>Expanding your Patient's Experience with the YSGG All-Tissue Laser</i></b>
14:10 - 15:30	Dr. Ibrahim Samir (Egypt) <b><i>Aesthetic Laser Dentistry, from Millennials to Gen Z</i></b>
<b>15:30 - 15:50</b>	<b>BREAK</b>
15:50 - 16:50	Dr. Marina Polonsky (Canada) <b><i>From Transmission to Absorption: A Laser Journey Through Dental Ceramics</i></b>
16:50 - 17:00	Closing Remarks



OCTOBER 5-6, 2024 ✦ DUBAI, UNITED ARAB EMIRATES





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