



International Academy for Adhesive Dentistry (IAAD)

First Biennial Meeting on Adhesive Dentistry Science Meets Practice

September 11–12, 2015
Renaissance Orlando
at SeaWorld, Florida

IAAD President: Jean-François Roulet
IAAD President-Elect: Markus B. Blatz
Program Co-Chair: Sillas Duarte, Jr
Program Co-Chair: Jin-Ho Phark

FINAL PROGRAM



Presented by
The Quintessence International Publishing Group

WELCOME



JEAN-FRANÇOIS ROULET



MARKUS B. BLATZ



SILLAS DUARTE, JR



JIN-HO PHARK

Dear Colleagues,

Welcome to the First Biennial Meeting on Adhesive Dentistry: Science Meets Practice!

For this inaugural meeting of the International Academy for Adhesive Dentistry (IAAD), our goal is to help clinicians understand the tremendous potential of adhesive dentistry in contemporary clinical practice. Our program co-chairs, Drs Sillas Duarte, Jr, and Jin-Ho Phark, have done a wonderful job in gathering together the very best presenters in the field to convene here in Orlando and share their vast knowledge and experience with us.

Our speakers will translate the latest adhesive science into its most important clinical applications without losing the nuances of the original research. Because of the importance of adhesion in implant dentistry, for example, where bonding interfaces and cellular surface adhesion are critical, special effort has been made to include presentations that detail how the interconnection of hard and soft tissues with the implant relates to clinical success.

We also hope to impress upon you the versatility of adhesion in contemporary dental work of all types. Adhesion remains vital for direct restorations, but it has now become both more important and more practical for all dental specialties. Over the next 2 days, you will see what adhesive dentistry can accomplish and learn how to improve adhesion in your own clinical practice. You will also gain a critical understanding of its limitations, ensuring that you have all the tools necessary to confidently implement what you learn here in your own practice as soon as next Monday!

On behalf of the IAAD, we look forward to sharing this exciting discourse with you here in Orlando!

Sincerely yours,

A handwritten signature in black ink, appearing to be 'JFR'.

Jean-François Roulet, DDS, Dr med dent, PhD
IAAD President

A handwritten signature in black ink, appearing to be 'Sillas Duarte, Jr.'.

Sillas Duarte, Jr, DDS, MS, PhD
Program Co-chair

A handwritten signature in black ink, appearing to be 'Markus B. Blatz'.

Markus B. Blatz, DMD, PhD, Dr med dent habil
IAAD President-Elect

A handwritten signature in black ink, appearing to be 'Jin-Ho Phark'.

Jin-Ho Phark, DDS, Dr med dent
Program Co-chair

GENERAL INFORMATION

REGISTRATION

All participants of the First Biennial Meeting on Adhesive Dentistry must register and obtain a badge before attending symposium events. Participants are responsible for the safekeeping of their badges. **If you lose or misplace your badge, there will be a replacement charge of \$300; there are no exceptions to this policy.**

REGISTRATION HOURS

Thursday, September 10 1:00 PM–5:00 PM
Friday, September 11 7:00 AM–5:30 PM
Saturday, September 12 7:00 AM–3:00 PM

Please wear your badge at all times. Admission to scientific sessions and exhibits is by badge only.

TECHNICAL EXHIBITS

Technical exhibits will be held on Friday and Saturday during the symposium in Crystal Ballroom CDE. All participants are invited to visit the exhibits to observe the latest developments in dental products offered by leading manufacturers.

Friday, September 11 7:00 AM–6:30 PM
Saturday, September 12 7:00 AM–4:30 PM

BREAKS

Complimentary breakfast, lunch, and drinks are available in the exhibit area during breaks. Times for breaks are listed in the Program Schedule.

CONDUCT AT SYMPOSIUM

If an attendee engages in unacceptable behavior, symposium organizers reserve the right to take any action they deem appropriate, including expelling offending persons from the symposium, without further notice or refund.

LECTURE ROOM

All general sessions will be held in Crystal Ballroom AB. **Photography, audiotaping, and videotaping are prohibited during the lecture sessions. Cellular telephones and other electronic devices must be turned off or switched to silent mode during the session.** Any attendee who violates this rule will be refused admission to the lecture room.

SYMPOSIUM WELCOME RECEPTION

The Welcome Reception will be held Friday, September 11 from 6:30 PM to 8:00 PM on the Function Lawn. Food and an open bar will be provided. Take this opportunity to renew friendships and meet colleagues from around the world.

CONTINUING EDUCATION CREDITS

One hour of continuing education (CE) credit is offered for every hour of program attendance. CE credit may be recorded on the continuing education form that is located in your registration packet. One copy of the completed form should be returned to the CE Counter at the Registration Desk. Quintessence Publishing will maintain this copy for 4 years. Quintessence will not send CE credit information or CE forms to state boards. CE credit awarded for participation in a course may not apply toward licensing renewal in all states. It is the responsibility of each participant to verify the requirements of his or her state licensing board. Meeting attendees are responsible for ensuring that their education credits are current and on file with their respective state board or other licensing/regulatory agency. Attendees of the symposium may receive up to 15.05 hours of CE credit. If you have any questions regarding CE credit, contact service@quintbook.com.

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Join Us
for the
Welcome Reception

Friday, September 11 • 6:30 PM–8:00 PM
Function Lawn

There will be plenty of food and drinks,
thanks to the generous support of our sponsors.

We look forward to seeing you there!

PROGRAM SCHEDULE

Friday, September 11, 2015

LEARNING OBJECTIVES

The goal of the first day of the symposium is to explore the longevity of adhesive joints, which significantly impacts clinical success. Attendees will learn about the dental adhesive interface, its current limitations, and its influence on patient outcomes. Attendees will also learn how to save time without sacrificing performance.

TIME	TITLE	SPEAKER(S)
7:00 AM–8:00 AM	<i>Registration and Complimentary Breakfast</i>	
8:00 AM–8:10 AM	<i>Opening Remarks</i>	Jean-François Roulet
SESSION I: LONGEVITY & CLINICAL SUCCESS: ADHESION AT THE DENTAL INTERFACE, PART 1		BART VAN MEERBEEK, MODERATOR
8:10 AM–8:45 AM	Adhesive Dentistry . . . How We Got Here and Where We Are Going: A Historical Perspective	Ronald E. Goldstein
8:45 AM–9:20 AM	Long-Term Stability of Bonded Interfaces	Junji Tagami
9:20 AM–9:55 AM	Preventing Bonding Degradation: The Future of Bonding to Dental Structures	Franklin Tay
9:55 AM–10:25 AM	<i>Coffee Break with Exhibitors</i>	
SESSION II: LONGEVITY & CLINICAL SUCCESS: ADHESION AT THE DENTAL INTERFACE, PART 2		BART VAN MEERBEEK, MODERATOR
10:25 AM–11:00 AM	Nondestructive Evaluation of Bonded Interfaces	Alireza Sadr
11:00 AM–11:35 AM	Clinical Validation of Adhesive Systems: Myths and Facts	Jorge Perdigão
11:35 AM–12:10 PM	Strategies to Improve the Durability of Dental Bonding	Leo Tjäderhane
12:10 PM–12:30 PM	Panel Discussion	All morning speakers
12:30 PM–1:30 PM	<i>Lunch Break with Exhibitors</i>	
12:30 PM–1:30 PM	<i>IAAD Business Meeting</i>	
SESSION III: CLINICAL APPLICATION & LIMITATIONS OF CURRENT ADHESIVE PROCEDURES		SILLAS DUARTE, JR, MODERATOR
1:30 PM–2:05 PM	Is 5 Seconds of Light Curing Enough?	Richard Price
2:05 PM–2:40 PM	Polymerization Shrinkage of Composite Resins	Antheunis Versluis
2:40 PM–3:15 PM	Are Bulk-Fill Composites Clinically Reliable?	Ronaldo Hirata
3:15 PM–3:45 PM	<i>Coffee Break with Exhibitors</i>	
SESSION IV: EXPANDING THE BOUNDARIES OF ADHESIVE PROCEDURES		SILLAS DUARTE, JR, MODERATOR
3:45 PM–4:20 PM	Treating Esthetic Challenges: Past to Present	Douglas A. Terry
4:20 PM–4:55 PM	Multidisciplinary Approach for Minimally Invasive Adhesive Rehabilitations	Victor Grover Rene Clavijo
4:55 PM–5:15 PM	Panel Discussion	All afternoon speakers
5:15 PM–6:30 PM	<i>Poster Session (Categories: Research and Clinical; Junior and Senior)</i>	
6:30 PM–8:00 PM	<i>Welcome Reception</i>	
7:00 PM–7:30 PM	<i>Handover of Presidency and Offices (During Welcome Reception)</i>	

PROGRAM SCHEDULE

Saturday, September 12, 2015

LEARNING OBJECTIVES

The goal of this final day of the symposium is to explore how to push the limits of adhesion for better dentistry. Topics will include how to mimic nature and become minimally invasive for the benefit of the patient; how to implement adhesion in CAD/CAM technology to solve challenging cases; and the importance of soft tissue adhesion to facilitate successful implantology.

TIME	TITLE	SPEAKER(S)
7:00 AM–8:10 AM	<i>Complimentary Breakfast</i>	
SESSION V:	ADHESION SCIENCE MEETS PRACTICE	MARKUS B. BLATZ, MODERATOR
8:10 AM–8:45 AM	Digital Replication of Natural Dentition	Paulo Kano
8:45 AM–9:20 AM	Fatigue Behavior of Dental Ceramics and Composites	Renan Belli
9:20 AM–9:55 AM	Minimally Invasive Adhesive Rehabilitation in Daily Practice	David Gerdolle
9:55 AM–10:25 AM	<i>Coffee Break with Exhibitors</i>	
SESSION VI:	ADHESION MEETS CAD/CAM TECHNOLOGY	MARKUS B. BLATZ, MODERATOR
10:25 AM–11:00 AM	Dual-Curing or Heated Composites for Bonding Indirect Restorations: Long-Term Clinical Evidence	Roland Frankenberger
11:00 AM–11:35 AM	Adhesive Restoration of the Worn Dentition	Petra Guess
11:35 AM–12:10 PM	Concepts for Adhesive Full-Mouth Reconstructions with CAD/CAM	Jin-Ho Phark, Sillas Duarte, Jr, and Neimar Sartori
12:10 PM–12:30 PM	Panel Discussion	All morning speakers
12:30 PM–1:30 PM	<i>Lunch Break with Exhibitors</i>	
SESSION VII:	ADHESION MEETS PROSTHODONTICS	JEAN-FRANÇOIS ROULET, MODERATOR
1:30 PM–2:05 PM	Challenges in Bonding to Zirconia	Mutlu Özcan
2:05 PM–2:40 PM	Resin-Bonded Fixed Partial Dentures: The Ultimate Adhesive Challenge	Matthias Kern
2:40 PM–3:15 PM	Plasma-Activated Bonding	Nelson R.F.A. Silva
3:15 PM–3:45 PM	<i>Coffee Break with Exhibitors</i>	
SESSION VIII:	ADHESION MEETS IMPLANTOLOGY—SCIENCE MEETS PRACTICE	JEAN-FRANÇOIS ROULET, MODERATOR
3:45 PM–4:20 PM	A Recipe for Clinical Success with Implant Restorations	Paul Weigl
4:20 PM–4:55 PM	Adhesion and Implants: The Intersection of Science and Art	Markus B. Blatz and Michael Bergler
4:55 PM–5:15 PM	Panel Discussion	All afternoon speakers
5:15 PM–5:25 PM	<i>Best Poster Prize Awards</i>	
5:25 PM–5:40 PM	<i>Transfer of Office, Conclusion</i>	

Friday, September 11, 2015

8:00 AM–8:10 AM

OPENING REMARKS

Jean-François Roulet



Jean-François Roulet, DDS, Dr med dent, PhD, is the former chair and current professor of the Department of Restorative Dental Sciences at the University of Florida. Dr Roulet has published more than 180 research papers as well as reviews, book chapters, and books. He is editor of the *Journal of Adhesive Dentistry*, *Oral Health & Preventive Dentistry*, and *Prophylaxe Impuls*.

His areas of interest include minimally invasive dentistry, dental materials (ie, composites and ceramics), adhesive dentistry, esthetic dentistry, and application concepts in preventive dentistry.

SESSION I: LONGEVITY & CLINICAL SUCCESS: ADHESION AT THE DENTAL INTERFACE, PART 1

Bart Van Meerbeek, Moderator



Bart Van Meerbeek, DDS, PhD, is currently head of the BIOMAT research group. His research includes studies related to the adhesion of restorative materials to tooth tissue, and more recently he has conducted research on dental zirconia, dentin remineralization, and pulp capping. His research has been published in more than 300 articles in national and international peer-reviewed journals, and he has been honored

with numerous awards including the IADR Young Research Award. Dr Van Meerbeek was president of the Pan-European Federation of the IADR and is currently secretary of the IADR Continental European Division. He is coeditor-in-chief of the *Journal of Adhesive Dentistry*.

8:10 AM–8:45 AM

ADHESIVE DENTISTRY . . . HOW WE GOT HERE AND WHERE WE ARE GOING: A HISTORICAL PERSPECTIVE

Ronald E. Goldstein

From the magical moment when Michael Buonocore and Rafael Bowen created the foundation of adhesive dentistry, esthetic and restorative dentistry would never be the same. Thousands of techniques and materials followed that forever changed the way we practice. Adhesive dentistry greatly improved the life of restorations, and patients welcomed smile transformations in one appointment. This presentation will demonstrate how the early contributions have added significantly to what we now call minimally invasive dentistry. Finally, we will look into what the future may hold.



Ronald E. Goldstein, DDS, is currently a clinical professor of oral rehabilitation at the Georgia Regents University School of Dentistry; an adjunct clinical professor of prosthodontics at Boston University Henry M. Goldman School of Dental Medicine; and an adjunct professor of restorative dentistry at the University of Texas Health Science Center in San Antonio. Dr Goldstein has presented continuing education courses at

more than 20 universities and lectured at over 700 dental meetings worldwide. He is a contributor to 10 published texts and author of *Esthetics in Dentistry* (PMPH, 1998) and *Change Your Smile* (Quintessence, 2009).

8:45 AM–9:20 AM

LONG-TERM STABILITY OF BONDED INTERFACES

Junji Tagami

When the bonding interface between adhesive resin and tooth substance is strong enough, the mechanical strength of the adhesive resin layer and the interface between the adhesive and composite resin may be the weak points of the bonding interface. Improving these weak points is necessary for better bonding. Higher conversion and less water sorption may be effective in improving the mechanical properties and long-term stability of the bonding resin layer. Development of a catalyst system to accelerate the curing of the bonding resin and composite resin is also considered to be effective in strengthening the interface. This presentation will discuss the technologies listed above, applying them to recent materials to improve the overall bond performance.



Junji Tagami, DDS, PhD, is the chair of the Tokyo Medical and Dental University Department of Cariology and Operative Dentistry, where he previously served as dean of the Faculty of Dentistry as well as executive director and executive vice president. His primary research involves studies related to cariology and the adhesion of restorative materials to tooth substance and dental materials within the broad area of adhesive dentistry. His research has been published in more than 300 articles in international and national peer-reviewed journals.

His research has been published in more than 300 articles in international and national peer-reviewed journals.

9:20 AM–9:55 AM

PREVENTING BONDING DEGRADATION: THE FUTURE OF BONDING TO DENTAL STRUCTURES

Franklin Tay

Endogenous dentin collagenolytic enzymes, matrix metalloproteinases, and cysteine cathepsins are responsible for the time-dependent hydrolysis of the collagen matrix of hybrid layers. Because collagen matrix integrity is essential for the preservation of the long-term bond strength of dentin, inhibition of endogenous dentin proteases is necessary for durable resin-bonded restorations. Several tentative approaches to prevent enzyme function have been proposed; some have already demonstrated clinical efficacy, while others need to be researched further before clinical protocols can be proposed. This presentation will examine both the principles and outcomes of techniques to prevent collagen hydrolysis in dentin-resin interfaces.



Franklin Tay, BDS (Hons), PhD, is a diplomate of the American Board of Endodontics and is professor and chair in the Department of Endodontics at Georgia Regents University. He also holds various teaching appointments in Hong Kong and China. Dr Tay is a fellow of the International College of Dentistry and the Academy of Dental Materials. He is an associate editor for the *Journal of Endodontics* and the *Journal of Dentistry*. His research interests include biomineralization of collagen scaffolds, remineralization of resin-dentin bonds, and endodontic materials, among others. He has published more than 400 papers in peer-reviewed journals, and his research has been supported by NIH grants.

SESSION II: LONGEVITY & CLINICAL SUCCESS: ADHESION AT THE DENTAL INTERFACE, PART 2

Bart Van Meerbeek, Moderator

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10:25 AM–11:00 AM

NONDESTRUCTIVE EVALUATION OF BONDED INTERFACES

Alireza Sadr

Dental adhesion has revolutionized clinical dentistry in recent decades. The development of functional monomers, which are capable of etching and promoting adhesion, has been a landmark in modern adhesive dentistry. In attempts to improve existing dental adhesives, many clinicians have focused on simplifying bonding procedures and composite resin placement to allow for large direct composite restorations. However, polymerization shrinkage stress remains a challenge for composite buildup on extensive preparations. Optical coherence tomography is an innovative research methodology that can monitor defect formation and propagation at the interface in real time. This presentation will show that a complete internal seal, especially at the deep dentin layers of a large preparation, is not impossible but represents a significant challenge for some combinations of adhesives and composites. Some strategies to overcome defect formation and propagation will be presented based on the visual evidence.



Alireza Sadr, DDS, PhD, is an acting associate professor of restorative dentistry at the University of Washington School of Dentistry in Seattle and holds an adjunct position in cariology and operative dentistry at Tokyo Medical and Dental University in Japan. Dr Sadr has worked with dental manufacturers to develop products serving minimally invasive nonsurgical therapy and direct composite restorations and has

developed a new technique for nondestructive optical evaluation of bonding interfaces. He has authored 100 research publications and has lectured at schools and conferences around the world. Dr Sadr is the recipient of many scientific awards, including five consecutive outstanding research prizes in recent years.

11:00 AM–11:35 AM

CLINICAL VALIDATION OF ADHESIVE SYSTEMS: MYTHS AND FACTS

Jorge Perdigão

Clinical studies are the ultimate challenge for any restorative material, but there are relatively few randomized clinical trials for dental adhesives. Because dental adhesives are still one of the few biomaterials launched without controlled clinical studies, dentists are forced to rely mostly on laboratory studies. For this reason, published clinical trials fall within the scope of phase IV (or postmarket) clinical trials. This presentation will discuss the myths and facts related to data interpretation from clinical

studies, as well as the frequent extrapolation from laboratory to clinical findings. (Adhesive dentistry research conducted with Alessandra Reis and Alessandro D. Loguercio at the State University of Ponta Grossa, Brazil.)



Jorge Perdigão, DMD, MS, PhD, is currently professor of operative dentistry at the University of Minnesota. He has delivered over 150 lectures worldwide and has published over 100 articles in international journals. He has written four book chapters on dental adhesion, including one in the latest edition of *Sturdevant's Art and Science of Operative Dentistry* (Mosby, 2012). Dr Perdigão is associate editor of the *Journal of*

Adhesive Dentistry and section editor of operative dentistry in the *Journal of Esthetic and Restorative Dentistry*.

11:35 AM–12:10 PM

STRATEGIES TO IMPROVE THE DURABILITY OF DENTAL BONDING

Leo Tjäderhane

Contemporary dental adhesive systems rely on formation of a primarily micromechanical bond to enamel and dentin. Strong and durable enamel bonding can be achieved with the etch-and-rinse approach or with selective etching of enamel when self-etching adhesive systems are used. However, dentin-bonded interfaces lose the integrity and bond strength over time both in vitro and in vivo for a variety of reasons. The endogenous collagenolytic enzymes, matrix metalloproteinases, and cysteine cathepsins cause the hydrolysis of the collagen matrix of hybrid layers. In addition, the hydrophilic nature of adhesive systems leads to insufficient resin impregnation of dentin, phase separation, and a low degree of polymerization, which can reduce the durability of the dentin-adhesive interface. In general, collagenolytic enzyme inhibition is a promising approach to improve hybrid layer preservation and bond strength durability. This presentation aims to review the current knowledge and potential future solutions to improve the durability of dental bonding, especially in dentin.



Leo Tjäderhane, DDS, PhD, is currently professor and head of the Department of Cariology, Restorative Dentistry, Endodontology, and Pedodontology at the Institute of Dentistry at the University of Oulu in Finland. He has published articles in international peer-reviewed publications. Dr Tjäderhane is a recipient of the IADR William J. Gies Award. He is an editorial board member of the *Journal of Endodontics*,

the *International Endodontic Journal*, and the *Journal of Dental Research*. He is an active member of the European Society for Endodontology (ESE), where he is ESE Research Committee chairman and ESE Executive Board member.

SESSION III: CLINICAL APPLICATION & LIMITATIONS OF CURRENT ADHESIVE PROCEDURES

Sillas Duarte, Jr, Moderator

Bio on page 10

1:30 PM–2:05 PM

IS 5 SECONDS OF LIGHT CURING ENOUGH?

Richard Price

Bulk-fill posterior resin-based composites (RBCs) are a recent development in direct resin technology. The materials can be applied in a single layer up to 4 to 5 mm thick and then light cured, thus avoiding the time-consuming process of layering and decreasing the possibility of voids between layers. Although contemporary curing lights are powerful—some even claiming a 1-second cure—there is little evidence that today's RBCs can be adequately light cured in 5 seconds. This presentation will discuss the plausibility of adequately light curing RBCs in 5 seconds.



Richard Price, BDS, DDS, MS, FRCD(C), FDS (Edin), PhD, runs the Advanced Restorative Elective for fourth-year dental students and works as a prosthodontist in the Faculty of Dentistry at Dalhousie University in Halifax, Nova Scotia. He is the inventor of the MARC system for teaching effective light curing and is actively involved in research on dental resins and dental curing lights. He has made numerous CDE presentations and authored more than 80 peer-reviewed articles.

2:05 PM–2:40 PM

POLYMERIZATION SHRINKAGE OF COMPOSITE RESINS

Antheunis Versluis

Polymerization shrinkage of resin-based materials is an enduring concern in dentistry and is associated with symptoms like postoperative sensitivity, debonding and secondary caries, and fracture. However, it is not the shrinkage itself that causes these symptoms but the stress it induces in adhesively restored teeth. Although stress is a familiar concept, assessing shrinkage stress is complicated and can create confusion or misconceptions. The objective of this lecture is to discuss and illustrate which properties and factors are significant in the initiation and duration of shrinkage stress. Understanding how shrinkage stress works helps to recognize the properties and techniques that are important for controlling shrinkage stress and those that are less effective or play an insignificant role.



Antheunis Versluis, PhD, currently serves as a professor and director of Biomaterials Research in the Department of Bioscience Research at the University of Tennessee Health Science Center. His research involves the study of biomechanics applied to dentistry. His research applications include shrinkage stress, interfacial stress, fracture, and fatigue. He has been invited to lecture internationally and has authored and co-authored numerous publications in restorative dentistry, prosthodontics, endodontics, and orthodontics.

2:40 PM–3:15 PM

ARE BULK-FILL COMPOSITES CLINICALLY RELIABLE?

Ronaldo Hirata

The use of composite resin restorations in posterior teeth has become routine in clinical practice because of the advantages of composite resin over traditional amalgam. Among several techniques described in the literature, the layering technique is commonly touted as reproducing aspects of natural dentition and allowing control of stress generated by polymerization shrinkage. However, the layering technique requires a profound familiarity with adhesive procedures, materials handling, and dental anatomy, which makes it complex and time-consuming. In order to overcome such drawbacks, advances in polymer chemistry engineering along with new layering techniques have been proposed. This lecture will discuss the traditional layering technique (ie, dentin, chromatic, and achromatic enamel) and the modified technique using the low-shrinkage composites (bulk flowable and enamel composite resin). The step-by-step sequence of each technique will be described along with the challenges and essentials of each one.



Ronaldo Hirata, DDS, MS, PhD, currently serves as an assistant professor in the New York University Biomaterials and Biomimetics Department, conducting research on implant and restorative biomaterials. He is coordinator of several esthetic and restorative dentistry postgraduate programs in Brazil and lectures extensively on esthetic restorations. Dr Hirata has published papers in journals and more than 10 book chapters and is author of *TIPS: Dicas em odontologia e estética* (Artes Médicas, 2010). He maintains a private practice limited to esthetic dentistry.

SESSION IV: EXPANDING THE BOUNDARIES OF ADHESIVE PROCEDURES

Sillas Duarte, Jr, Moderator

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3:45 PM–4:20 PM

TREATING ESTHETIC CHALLENGES: PAST TO PRESENT

Douglas A. Terry

For restorative teams, esthetic challenges have persisted through years of innovation. As biomaterials have improved, the challenge remains to create optimal esthetics with the materials that are available. The evolution of materials science and the enhancement of adhesive biomaterials has allowed clinicians and technicians to use materials in new ways that accommodate more conservative preparation designs, allow for more thorough adhesive procedures, and offer optimal biomimetic results. From this evolution, it is evident that proper techniques and protocols can be more important than the materials we use. In addition, the progression to more advanced techniques and biomaterials has provided restorative teams with greater efficiency and predictability. This presentation will illustrate the evolution of composite resin materials and different restorative techniques in esthetic restoration.



Douglas A. Terry, DDS, is an assistant professor in the Department of General Practice and Dental Public Health at the University of Texas Health Science Center at Houston. He is an accredited member of the American Academy of Cosmetic Dentistry as well as US vice president of International Oral Design. Dr Terry is the founder and CEO of Design Technique International and the Institute of Esthetic and Restorative Dentistry.

He has published over 230 articles on esthetic and restorative dentistry and is the author of *Esthetic and Restorative Dentistry: Material Selection and Technique* (Quintessence, 2013) and *Smile! Your Guide to Esthetic Dental Treatment* (Quintessence, 2014). He has lectured nationally and internationally and maintains a private practice in Houston.

4:20 PM–4:55 PM

MULTIDISCIPLINARY APPROACH FOR MINIMALLY INVASIVE ADHESIVE REHABILITATIONS

Victor Grover Rene Clavijo

Contemporary esthetic restorative dentistry can offer effective smile rehabilitation using a conservative approach that emphasizes minimal removal of sound dental structure. Based on current research, clinical case reports, and video demonstrations, this lecture will present a multidisciplinary and ultraconservative method for restoring the harmony of the smile. In addition to identifying the keys of ultraconservative esthetic restoration, clinicians will learn when, how, and why minimal preparation and preparationless approaches should be employed and the treatment protocols to follow, from treatment planning to cementation.



Victor Grover Rene Clavijo, DDS, MS, PhD, is a professor in the Advanced Program in Implantology and Restorative Dentistry at ImplantePerio Institute, São Paulo, Brazil. He is a member of the editorial scientific board for *Dicas* magazine. Dr Clavijo maintains a private practice limited to restorative esthetic dentistry.

Saturday, September 12, 2015

SESSION V: ADHESION SCIENCE MEETS PRACTICE

Markus B. Blatz, Moderator

Bio on page 12

8:10 AM–8:45 AM

DIGITAL REPLICATION OF NATURAL DENTITION

Paulo Kano

The reproduction of natural dentition, using models and CAD/CAM, begets highly satisfactory and promising outcomes. However, some problems may still be prevalent during the course of these treatments, even when using the best tools. These shortcomings are not inherent to the digital/technologic components but are often linked to manual inability of the clinician and/or inadequate planning prior to the procedure. Audience members will learn the essential considerations for planning dentition reproduction, as well as ways to refine the technique for the associated technologies, ensuring the highest level of success for future procedures.



Paulo Kano, DDS, MSD, CDT, has held various academic positions in São Paulo and Florianópolis, Brazil, and has been a dental technician since 1974. He has also maintained a private practice since 1988. He is the author of *Challenging Nature: Wax-Up Techniques in Aesthetics and Functional Occlusion* (Quintessence, 2011), which has been translated into five languages.

8:45 AM–9:20 AM

FATIGUE BEHAVIOR OF DENTAL CERAMICS AND COMPOSITES

Renan Belli

Dental materials undergo the challenges of a harsh environment where mechanical and chemical components contribute to property degradation and ultimately the shortened lifespan of dental restorations. In this presentation, new clinical data analyzing a large dataset of CAD/CAM–manufactured posterior ceramic restorations will be presented along with lifespan forecast predictions for different materials and restoration types. Fractographic analysis of recovered fractured pieces will be presented, and a parallel to clinical findings will be traced by describing fast-fracture and fatigue mechanisms in vitro using mechanistic approaches (eg, subcritical crack growth, fracture toughness). Ultimately, fracture properties of dental ceramics and composites will be discussed with a focus on energy for fracture, where the elastic-plastic and R-curve behaviors of resin composites at low strain rates have an important role.



Renan Belli, DMD, MSc, PhD, is an associate scientist at the Laboratory for Biomaterials Research at the Friedrich-Alexander University Erlangen-Nürnberg in Germany. His research focuses on the characterization and development of restoratives (ie, mainly resin composites and ceramics). He serves as the vice president of Fracto Forum International, which offers a platform for scientific exchange in the area of dental fractography.

9:20 AM–9:55 AM

MINIMALLY INVASIVE ADHESIVE REHABILITATION IN DAILY PRACTICE

David Gerdolle

Thorough understanding of the biomechanical behavior of teeth, both sound and restored, on macro and micro levels allows us to choose the most effective measures to save teeth and be less aggressive in our treatment protocols. The importance of early diagnosis, healthy strategy, and skillful execution will be evident in this presentation, which proposes a proactive approach for both vital and nonvital teeth. Besides useful guidelines and clinical tips, new concepts will also be introduced that will help lengthen the lifespan of restorations and restored teeth.



David Gerdolle, DDS, MS, is currently involved in post-graduate dental teaching at the University of Paris and research programs on resin composites at the University of Nancy, France. Dr Gerdolle has lectured extensively, given hands-on courses, and performed live case demonstrations of adhesive dentistry and indirect restorations. He has also published widely in scientific journals. He maintains a private practice limited

to conservative and minimally invasive dentistry.

SESSION VI: ADHESION MEETS CAD/CAM TECHNOLOGY

Markus B. Blatz, Moderator

Bio on page 12

10:25 AM–11:00 AM

DUAL-CURING OR HEATED COMPOSITES FOR BONDING INDIRECT RESTORATIONS: LONG-TERM CLINICAL EVIDENCE

Roland Frankenberger

Despite the success of direct restorative materials such as resin composites, indirect restorations are still very popular. This is mainly due to the tremendous effort involved in direct layering, especially when it comes to cusp replacement. But it is also due to billing aspects and a certain ceramic thinking especially common in Central Europe. Among different luting scenarios, it is doubted whether purely light-cured adhesives and resin composites can guarantee sufficient light curing through ceramic inlays and partial crowns. Dual-curing adhesives and luting composites have been favorably judged in the literature in the field, but pre-heating has been discussed thoroughly in the past as well. This lecture presents an overview of innovative data and thermographic images to elucidate the question as to whether these techniques are still state of the art in 2015.



Roland Frankenberger, DMD, PhD, is a fellow of the International College of Dentists, the Academy of Dental Materials, and the Pierre Fauchard Academy. He has served as chair of the Department of Operative Dentistry and Endodontics at the University of Marburg, Germany, and was editor-in-chief of the German version of *Quintessence International*. He has also served as president of the German Association for

Conservative Dentistry, as senior editor for *Oral Biology and Dentistry*, and as an editorial board member for various journals including the *Journal of Adhesive Dentistry* and the *American Journal of Dentistry*.

11:00 AM–11:35 AM

ADHESIVE RESTORATION OF THE WORN DENTITION

Petra Guess

Dental erosion and tooth wear are recognized as global public oral health problems leading to significant esthetic and functional impairments of affected patients. Restoring such teeth with conventional metal-ceramic full-coverage crowns frequently involves elective endodontic therapy, surgical crown lengthening, and significant additional loss of tooth structure. In contrast, advancements in all-ceramic systems and adhesive technologies have enabled the development of innovative defect-oriented treatment concepts for restoring the compromised dentition. This lecture aims to provide guidelines for minimally invasive preparation designs, recommend ideal ceramic thicknesses, help clinicians select materials and CAD/CAM systems, and present evidence for the clinical success of all-ceramic materials in minimally invasive restorations.



Petra Guess, DDS, Dr med dent, PhD, is an associate professor of prosthodontics at Albert-Ludwigs University in Freiburg, Germany. She is a board-certified prosthodontist of the German Society for Prosthodontics and Dental Materials Science. For 3 years, she was a visiting scientist in the Biomaterials and Biomimetics Department at New York University.

11:35 AM–12:10 PM

CONCEPTS FOR ADHESIVE FULL-MOUTH RECONSTRUCTIONS WITH CAD/CAM

Jin-Ho Phark, Sillas Duarte, Jr, and Neimar Sartori

Novel conservative restorative techniques using bonded CAD/CAM restorations are able to provide patients with treatment alternatives that until recently were not considered feasible. This presentation provides a systematic and scientific approach to selecting esthetic treatment using available in-office CAD/CAM materials. Original research data are presented with special emphasis on adhesive techniques and design and selection of new materials. Attendees will be able to understand challenges related to a stable adhesive interface, choose materials for diverse clinical situations, and grasp the advantages and limitations of common in-office CAD/CAM materials.



Jin-Ho Phark, DDS, Dr med dent, is an assistant professor of clinical dentistry in the University of Southern California Division of Restorative Sciences, where he also serves as the director of the Dental Biomaterials Research Laboratory and as the codirector of the Advanced Program in Operative and Esthetic Dentistry. He is an associate editor of *Quintessence of Dental Technology*. Dr Phark serves as reviewer for several

journals and has lectured and published nationally and internationally. His main research interest is in the field of biomaterials. He is the recipient of the IADR Arthur Frechette Award in Prosthodontics.



Sillas Duarte, Jr, DDS, MS, PhD, is associate professor and chair of the University of Southern California Division of Restorative Sciences, where he is also director of the Advanced Program in Operative Dentistry. Dr Duarte is editor-in-chief of *Quintessence of Dental Technology* and serves on the editorial boards of several other journals and has published extensively on esthetic and adhesive dentistry. His research focuses on bonding

to dental structures, composites, and ceramics.



Neimar Sartori, DDS, MS, PhD, is an assistant professor of clinical dentistry in the University of Southern California Department of Preventive and Restorative Sciences. He is also assistant director of the Advanced Program in Operative Dentistry. Dr Sartori serves as a reviewer for several journals and has published nationally and internationally on esthetic and adhesive dentistry. His research focuses on preventing bonding

degradation of the adhesive interface formed between dental structures and restorative materials.

SESSION VII: ADHESION MEETS PROSTHODONTICS

Jean-François Roulet, Moderator

Bio on page 6

1:30 PM–2:05 PM

CHALLENGES IN BONDING TO ZIRCONIA

Mutlu Özcan

The advances in adhesive technologies in combination with the introduction of new materials used with CAD/CAM technologies have recently made conventional prosthetic dentistry less invasive. Zirconia is now a frequent material of choice for tooth- and implant-borne reconstructions. In addition to mechanical advantages, some aspects of zirconia, such as its adhesive qualities, hold potential for further development and are being investigated with great interest. Ideal adhesion of resin cements to both the dental tissues and restoration materials requires meticulous conditioning and cementation protocols. This lecture will highlight the clinical and technical parameters during cementation of zirconia and propose step-by-step guidelines.



Mutlu Özcan, DDS, Dr med dent, PhD, is currently professor and research associate at the Clinical Dental Biomaterials Unit at the University Medical Center Groningen, The Netherlands, as well as professor and head of the Dental Materials Unit at the University of Zurich Dental School in Switzerland. She is an honorary secretary of the European Prosthodontic Association and president of the IADR/Dental Materials Group. She has authored more than 300 articles in peer-reviewed journals and has given over 500 presentations at international scientific meetings. Her clinical expertise is on reconstructive dentistry with a particular emphasis on adhesive applications.

She has authored more than 300 articles in peer-reviewed journals and has given over 500 presentations at international scientific meetings. Her clinical expertise is on reconstructive dentistry with a particular emphasis on adhesive applications.

2:05 PM–2:40 PM

RESIN-BONDED FIXED PARTIAL DENTURES: THE ULTIMATE ADHESIVE CHALLENGE

Matthias Kern

Resin-bonded fixed dental prostheses (RBFDPs) with two metal retainer wings were introduced over 30 years ago as a minimally invasive replacement for missing teeth when the abutment teeth were caries free. Ten years later, cantilevered RBFDPs with a single ceramic retainer wing were introduced. They provide better esthetics and are less invasive than two-retainer RBFDPs. Long-term data on this minimally invasive treatment option are available, and it is well known how to bond these restorations successfully. However, it is a prerequisite that the clinician has a good understanding of adhesive procedures. This lecture summarizes the successful clinical application of all-ceramic single-retainer RBFDPs, which often provide an excellent and less costly treatment alternative to single implants or conventional crown-retained FDPs.



Matthias Kern, DMD, PhD, is currently professor and chairman of the Department of Prosthodontics, Pro-paedeutics, and Dental Materials at Christian-Albrechts University at Kiel in Germany. Dr Kern is a recipient of the Greater New York Academy of Prosthodontics Schweitzer Research Award. He is president of the German Society for Prosthetic Dentistry.

2:40 PM–3:15 PM

PLASMA-ACTIVATED BONDING

Nelson R.F.A. Silva

This presentation will address the potential of a novel surface/interface treatment modality for various aspects of adhesion and other biomaterial surfaces employing atmosphere pressure plasmas. Drawing on the most recent articles in the dental field, this presentation will cover a contemporary clinical case using plasma as part of the bonding procedure in order to illustrate the unique uses of pressure plasmas. This presentation will give the audience a vision of the future of this exciting alternate material.



Nelson R.F.A. Silva, DDS, MS, PhD, is a professor in the Department of Restorative Dentistry at Federal University of Minas Gerais/School of Dentistry (UFMG/FO) in Belo Horizonte, Brazil. Dr Silva has published several articles and book chapters and is on the review boards of several journals. His clinical and research fields of interest include translational research, laboratory and clinical aspects in the success of esthetic restorations

using CAD/CAM and implants, and the development of atmosphere pressure plasmas for dentistry.

SESSION VIII: ADHESION MEETS IMPLANTOLOGY—SCIENCE MEETS PRACTICE

Jean-François Roulet, Moderator

Bio on page 6

3:45 PM–4:20 PM

A RECIPE FOR CLINICAL SUCCESS WITH IMPLANT RESTORATIONS

Paul Weigl

Implantology offered in the dental office must be able to serve the prevailing expectations of patients today: optimal esthetic results with minimal appointments and minimally invasive surgical procedures. An implant surrounded by both hard and soft tissue is a recipe for success for even the most demanding of patient guidelines. This presentation will explain the benefits of minimally invasive treatment using small implants and abutments and aggressive thread design to create predictable and long-lasting esthetic results that meet contemporary expectations for effective dental work.



Paul Weigl, DDS, is an assistant professor, senior specialist, and director of preclinical studies in the Department of Prosthodontics at the Johann Wolfgang Goethe-University Frankfurt am Main in Germany, where he is also head of the Department of Postgraduate Education and director of the master's program in oral implantology. Dr Weigl's research focuses on prosthetics on implants.

4:20 PM–4:55 PM

ADHESION AND IMPLANTS: THE INTERSECTION OF SCIENCE AND ART

Markus B. Blatz and Michael Bergler

Modern adhesive dentistry goes far beyond “bonding to teeth.” A plethora of new materials and laboratory-based CAD/CAM systems are entering the market to enhance esthetic results, functional longevity, and precision fit. Selecting the proper materials and techniques for implant-supported restorations based on patients’ individual needs has become increasingly challenging because more esthetic materials are usually associated with poorer physical strength. However, similar to tooth-supported restorations, adhesive technologies can be applied to strengthen selected materials and offer new treatment options and material combinations that are otherwise not possible. This presentation by a master dental technician–clinician team will discuss a variety of adhesive interfaces in implant restoration from functional, esthetic, and biologic standpoints, based on the current scientific evidence and illustrated with clinical examples.



Markus B. Blatz, DMD, PhD, Dr med dent habil, is professor of restorative dentistry and chairman of the Department of Preventive and Restorative Sciences at the University of Pennsylvania, where he also founded the Penn Dental Medicine CAD/CAM Ceramic Center. Dr Blatz is a board-certified diplomate of the German Society for Prosthodontics and Dental Materials Science as well as a member of several professional organizations. Recently, Dr Blatz founded and became president-elect of IAAD. He is an associate editor of *Quintessence International* and has published and lectured extensively on dental esthetics, restorative dentistry, and implantology.



Michael Bergler, MDT, is internationally recognized in the area of esthetic ceramic restorations and CAD/CAM technology. He is cofounder of the Penn Dental Medicine CAD/CAM Ceramic Center and recently received a faculty position in the Department of Preventive and Restorative Sciences at the University of Pennsylvania. He has published and lectured extensively on restorative materials and dental technology.

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SPEAKER DISCLOSURES

Renan Belli, DMD, MSc, PhD

None

Michael Bergler, MDT

Research: 3M ESPE, Noritake, Ivoclar Vivadent, Zirkonzahn, 3Shape, Nobel Biocare, Straumann

Markus Blatz, DMD, PhD, Dr med dent habil

Honoraria: Nobel Biocare, Kuraray Noritake

Research grants: GC, Shofu, Henry Schein, 3M ESPE, Ivoclar Vivadent, Zirkonzahn, Vita

Victor Grover Rene Clavijo, DDS, MS, PhD

None

Sillas Duarte, Jr, DDS, MS, PhD

Consultant: 3M ESPE, Ivoclar Vivadent, Vita

Ronald Frankenberger, DMD, PhD

None

David Gerdolle, DDS, MS

None

Ronald E. Goldstein, DDS

Consultant, inventor, lecturer, and/or investigator: Nobel Biocare, Implant Innovation Inc, Keystone Dental, Dentsply, Brasseler USA, Zimmer, Imaging Sciences, BioHorizons, 3M ESPE, Bisco, Biora, Siemens, Premier, GC America, Ivoclar Vivadent, Den-Mat, Shofu, Vident, ProDentec, Panasonic, Minolta, Kodak, Sony, Zeiss, Hu-Friedy, National Dental Network, Global Surgical, Materialise, Biolase, Belmont, Consult Pro, Stoma, XCPT, Convergent Dental, Titan Instruments, Heraeus Kulzer, Cosmedent, LED Dental, BTI, Osteohealth, Partners in Synergy, DentalXP, Ritter Dental, Carestream, and DentalMaster

Petra Guess, DDS, Dr med dent, PhD

Research contract: Vita Zahnfabrik, Ivoclar Vivadent, Straumann, Sirona, 3M ESPE

Ronaldo Hirata, DDS, MS, PhD

Research grant: Ivoclar Vivadent, Zimmer, FGM

Lecture honorarium: 3M ESPE, Ultradent, Dentsply

Paulo Kano, DDS, MSD, CDT

None

Matthias Kern, DMD, PhD

Lecture honorarium, travel, research support: Ivoclar Vivadent, Vita Zahnfabrik, Kuraray

Mutlu Özcan, DDS, Dr med dent, PhD

None

Jorge Perdigão, DMD, MS, PhD

None

Jin-Ho Phark, DDS, Dr med dent, PhD

None

Richard Price, BDS, DDS, MS, FRCD(C), FDS(Edin), PhD

Financial interest: Blue Light Analytics

Jean-Francois Roulet, DDS, Dr med dent, PhD

Lecturing: Ivoclar Vivadent, Ultradent, Electro Medical Systems

Research contract: Ivoclar Vivadent

Alireza Sadr, DDS, PhD

Research through university: Kuraray Noritake

Neimar Sartori, DDS, MS, PhD

None

Nelson R.F.A. Silva, DDS, MS, PhD

None

Junji Tagami, DDS, PhD

Honorarium: Tokuyama Dental, Kuraray Noritake, 3M ESPE, Shofu, GC

Research through university: Tokuyama Dental, Kuraray Noritake, GC, Shofu

Franklin Tay, BDS (Hons), PhD

None

Douglas Terry, DDS

None

Leo Tjäderhane, DDS, PhD

None

Bart Van Meerbeek, DDS, PhD

Research projects: Run several research projects for diverse dental companies on the basis of KU Leuven Research and Development service contracts

Antheunis Versluis, PhD

Research through university: GC Co (materials), 3M ESPE (materials), 3M Foundation (gift)

Paul Weigl, DDS

None

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IAAD 2015 POSTER PRESENTATION TITLES

- No. 1** Nanolayering in Resin-dentin Interfaces Created by Commercialized 10-MDP-containing Self-etch/Universal Primers **STUDENT**
Zheng-yi Zhang,* Li-qun Zhou, Fu-cong Tian, Li-na Niu, Bai-ping Fu, Cui Huang, David Pashley, Franklin Tay
Hangzhou, China
- No. 2** 10-MDP or Its Analog as Self-etch Primers for Dentin Bonding **JUNIOR**
Fu-cong Tian,* Zhengyi Zhang, Li-qun Zhou, Eduardo Bortoluzzi, Li-na Niu, Jian-feng Zhou, David Pashley, Franklin Tay
Beijing, China
- No. 3** Analysis of Experimental Adhesive System Containing ZnCl₂ as MMPs Inhibitor **STUDENT**
Giselle Soares Almeida,* Eduardo Moreira da Silva, Luisa Chateubriand Pegado, Glauco Botelho, Jose Guilherme Antunes Guimaraes, Laiza Tatiana Poskus
Rio de Janeiro, Brazil
- No. 4** Bond Strength of an Experimental One-Bottle 4-META Adhesive System **STUDENT**
Dirciane P. Reis,* Marcelle G. Garcia, Jaime D. Noronha Filho, Cristiane M. Amaral, Alice M. Diniz, Eduardo M. Silva
Niterói, RJ, Brazil
- No. 5** Shear Bond Strengths to Dentin of a New Universal Bonding Agent in Multiple Modes **JUNIOR**
Fernando Astorga,* Kristi Erickson, Terence Donovan, Edward Swift
Aurora, CO, USA
- No. 6** Influence of Atmospheric Plasma on the Durability of Dentin Adhesion **JUNIOR**
Ana Paula Ayres,* Gabriel Abuna, Fábio Nascimento, Gláucia Ambrosano, Marcelo Giannini
Piracicaba, SP, Brazil
- No. 7** Effect of Biosilicate on Adhesion to Carious Dentin **SENIOR**
Michelle Chinelatti,* Renata Morais, Saulo Geraldelli, Fernanda Pires-de-Souza
Ribeirão, SP, Brazil
- No. 8** Biosilicate as Dentin Pretreatment for Total-Etch and Self-Etch Adhesives **SENIOR**
Marta Contente,* Renata Morais, Michelle Chinelatti, Fernanda Pires-de-Souza
Ribeirão, SP, Brazil
- No. 9** Microtensile Bond Strength of Adhesive Systems in Different Regions of Dentin on a Class II Preparation **SENIOR**
Mario Sinhorette,* Eveline Soares, Gabriel Abuna, Jean-François Roulet, Saulo Geraldelli
Piracicaba, SP, Brazil
- No. 10** Arginine Incorporated to an Etch-and-Rinse Adhesive System **SENIOR**
Eveline F. Soares, Andres Alvarez, Mario Alexandre Sinhorette, Saulo Geraldelli,* Marcelle M. Nascimento
Piracicaba, SP, Brazil
- No. 11** New Strategy in Dentin Treatment Previous to Etch-and-Rinse Adhesive Technique **STUDENT**
Marcelle G. Garcia,* Tatiana Foscaldo, Jaime D. Noronha Filho, Luciana Miragaya, Dirciane P. Reis, Eduardo M. Silva
Niterói, RJ, Brazil
- No. 12** Radiotherapy Effect on Dentin-Composite Interface by Bond Strength Evaluation **JUNIOR**
Eveline Soares,* Ana Rosa Costa, Américo Correr, Mário Alexandre Sinhorette, Franklin Garcia-Godoy, Lourenço Correr Sobrinho
Piracicaba, SP, Brazil
- No. 13** Effect of Deproteinization on Dentin Bond Strength in Amelogenesis Imperfecta **JUNIOR**
Bayrak Sule, Nuray Tuloglu,* Emine Sen Tunc
Eskisehir, Turkey
- No. 14** Different Adhesives for Immediate Dentin Sealing: Effects on μ TBS Durability **JUNIOR**
Roberto César do Amaral,* Ramiro Chavasco Ferreira Filho, Caroline Ely, José Augusto Rodrigues, Jean François Roulet, Andre Figueiredo Reis
São Paulo, Brazil
- No. 15** Immediate Dentin Sealing: A Narrative Review **SENIOR**
Nuray Tuloglu, Fusun Ozer, Nesrin Esen Dagli,* Markus B. Blatz
Eskisehir, Turkey
- No. 16** Shear Bond Strength of Three Adhesive Luting Agents to Bovine Dentin **STUDENT**
Daniel Martir Moreno,* Juan Agosto, Augusto R. Elías Boneta, Francisco J. Muñoz Torre
San Juan, Puerto Rico
- No. 17** Bond Strength of a Newly Developed Luting Resin Composite Cement **SENIOR**
Masao Hanabusa,* Takatsugu Yamamoto, Yasuko Momoi
Yokohama, Kanagawa, Japan
- No. 18** Aging Protocols' Influence on Adhesive Interface Using Different Adhesive Systems **JUNIOR**
Sarah Almeida,* Keyla Pereira, Nathália Luz, Laiza Poskus
Niterói, RJ, Brazil
- No. 19** Effect of Combination of Different Core Build-Up Composites/Dual-Cure Adhesives on Microtensile Bond Strength to Dentin After Long-Term Storage **JUNIOR**
Pedro HC Oliveira,* José A. Rodrigues, Alessandra Cassoni, André F. Reis
Guarulhos, SP, Brazil
- No. 20** Effects of in-vivo and in-vitro Aging Protocols on Resin-Dentin Bond Strength **SENIOR**
César R. Pucci,* Heleine M. C. Rego, Tais da Silva Alves, Eduardo Bresciani, Franklin R. Tay
São Paulo, Brazil
- No. 21** Effect of Fluoride Varnishes on Bond Strength to Enamel **SENIOR**
Nuray Tuloglu, Sule Bayrak,* Markus B. Blatz, Fusun Ozer
Eskisehir, Turkey

IAAD 2015 POSTER PRESENTATION TITLES

- No. 22** Temporal Development of Dentin-Composite Bond Strength during Curing **JUNIOR**
Jiawen Guo, Brian Holmes, Young Heo, Jihua Chen, Alex Fok*
Xi'an, China
- No. 23** Evaluation of Dentin Bond Strength by a Thin-Film Scratch Test **JUNIOR**
Shusuke Kusakabe, H. Ralph Rawls, Masato Hotta*
Mizuho, Gifu, Japan
- No. 24** Adhesion of Resin Cement to Zirconia Using Plasma and Primer **STUDENT**
William Matthew Negreiros, Vitor Trassi*
Fernandes Silva de Souza, Bruno Bellotti Lopes,
Glaucia Maria Bovi Ambrosano, Marcelo Giannini
Piracicaba, SP, Brazil
- No. 25** Effect of Surface Treatment on Bond Strength to Hybrid Ceramic **JUNIOR**
Frank Spitznagel, Sebastian Horvath, Petra Guess,*
Markus B. Blatz
Freiburg, Germany
- No. 26** Bond Strength of Different Luting Cements to Metal Alloy Surfaces **SENIOR**
Fusun Ozer, Nesrin E. Dagli, Deepika Ramachandran,*
Elif P. Tunc, Batucan Yaman, Deniz Sen, Markus B. Blatz
Philadelphia, PA, USA
- No. 27** Bond Strength of Multi-Mode Adhesives to Indirect Restorative Materials **SENIOR**
Patricia Makishi, Carolina Bosso André, João Paulo Lyra,
Renata Bacelar-Sá, Lourenço Correr-Sobrinho,
*Marcelo Giannini**
Piracicaba, SP, Brazil
- No. 28** Acoustic Properties of Interfacial Debonding of Resin Composite Restoration during Curing **STUDENT**
Bo Yang, Young Heo, Yan Wang, Alex Fok*
Guangzhou, China
- No. 29** Internal Adaptation Depending on Resin Polymerization Stress **JUNIOR**
Seung-Hoon Han, Alireza Sadr, Junji Tagami, Sung-Ho Park*
Suwon, Korea
- No. 30** Influence of Oral Biofilm's Organic Acids on Resin Composites Properties **STUDENT**
Stéphane da Silva, Cristiane Mariote Amaral,*
Eduardo Moreira da Silva, Laiza Tatiana Poskus
Rio de Janeiro, Brazil
- No. 31** Influence of PVM/MA Copolymer on Surface Adherence of *Streptococcus mutans* **STUDENT**
Shutong Zhan, Ozgur Irmak, Francis Mante, Markus B. Blatz,*
Joseph DiRienzo, Fusun Ozer
Philadelphia, PA, USA
- No. 32** Push-Out Bond Strength of an Experimental Dentin Bovine Post **STUDENT**
Luisa Pegado, Alice Penelas, Isis Simões, Giselle Almeida,*
Eduardo Silva, Laiza Poskus, Jose Guilherme Guimaraes
Niterói, RJ, Brazil
- No. 33** Withdrawn
- No. 34** N-acetyl cysteine (NAC)-directed Detoxification of Methacryloxyethyl cetyl ammonium chloride (DMAE-CB) **JUNIOR**
Yang Jiao, Sai Ma, Jinlong Sun, Jinghao Ban, Jihua Chen*
Xi'an, China
- No. 35** Canal Irrigants and Coronal Fracture-Resistance of Endodontically Treated and Bleached Teeth **SENIOR**
Maryam Khoroushi, Sanaz Ziaei, Fateme Tavakol*
Isfahan, Iran
- No. 36** Composite Restorations in Dental Traumatology: From Feasible to (Almost) Untreatable **JUNIOR**
*Anne-Katrin Lührs**
Hannover, Germany
- No. 37** Maxillary Arch Rehabilitation Using Telescopic Copings and Adhesive Technology **STUDENT**
Lydia R. Legg, Dianna Lenick*
Gainesville, FL, USA
- No. 38** Interdisciplinary Approach to Improve Esthetics in the Anterior Maxilla **JUNIOR**
*Silvia Amaya-Pajares**
Chapel Hill, NC, USA
- No. 39** A Novel Solution for Anterior Implant Restoration **JUNIOR**
*Yen Jung Lai**
Hualien Tzu Chi Medical Center, Taiwan
- No. 40** The Natural Restoration: Adhesive Reattachment of a Tooth Fragment Retrieved From Lip **STUDENT**
Ameer Al Baroudi, Luana Oliveira Haas
Fort Lauderdale, FL, USA
- No. 41** Diastema Closure Using Prefabricated Composite Veneers **STUDENT**
Amr Azhari, Luana Oliveira Haas
Fort Lauderdale, FL, USA
- No. 42** Reproducing Anatomy and Aesthetics in Direct Composites Restoration **STUDENT**
Zainab Alsadah, Luana Oliveira Haas
Fort Lauderdale, FL, USA

*Presenting author **STUDENT** = Student scientist/clinician **JUNIOR** = Junior scientist/clinician **SENIOR** = Senior scientist/clinician

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