



## PURSUIT OF MASTERS EXCELLENCE

June 24-26, 2005 • San Diego, California

21st International Symposium on Ceramics

**PROGRAM CHAIRMAN**  
Gerard J. Chiche, DDS

### TOPICS

- Extensive Rehabilitation
- Choice of Ceramic Systems
- Interdisciplinary Implant and Esthetic Treatment
- Dentist-Technician Teamwork



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# FINAL PROGRAM



Dear Colleague:

I am pleased to welcome you to the 21st International Symposium on Ceramics. The Masters Teamwork program, now an ISC tradition, provides a unique opportunity for you to attend lectures by internationally renowned master clinicians/ceramists, who share their own personal strategies for achieving optimal esthetic results. If the last ISC is any indication—and I believe it is—you should prepare yourself for an electrifying symposium experience.

This year's symposium is dedicated to the memory of Professor Peter Schärer, whose visionary ideas and tireless pursuit of scientific and clinical knowledge made him a national and international leader in prosthodontics and esthetic dentistry. As a regular speaker at this symposium dating back to its beginnings, Professor Schärer helped solidify its reputation for promoting esthetic excellence. May his passion for learning continue to inspire all of us who, directly or indirectly, benefited so greatly from his dedication to dentistry, especially in the field of ceramic restorations.

A handwritten signature in black ink, appearing to read 'G. Chiche'.

Gerard J. Chiche, DDS  
Program Chairman



Peter Schärer  
1933–2004

## SESSION I: EXTENSIVE REHABILITATION

*Moderator: Gerard J. Chiche*

7:45 AM–8:00 AM



**Gerard J. Chiche, DDS**, is the Helmer Professor and chairman of the Prosthodontics Department at Louisiana State University. He also maintains an intra-mural restorative practice devoted to esthetics and implants. Dr Chiche has presented more than 500 programs nationally and internationally and is a member of the American College of Dentists, the American Academy of Crown and Bridge, the American Academy of Restorative Dentistry, and the Omicron Kappa Upsilon Dental Honor Society. He is a director of the American Academy of Esthetic Dentistry and the author of *Smile Design: A Guide for Clinician, Ceramist, and Patient* (Quintessence, 2004) and the co-author of *Esthetics of Anterior Fixed Prosthodontics* (Quintessence, 1994).

8:00 AM–8:45 AM

### Introduction



**Ronald E. Goldstein, DDS**, is clinical professor of oral rehabilitation at the Medical College of Georgia School of Dentistry in Augusta; adjunct clinical professor of prosthodontics at Boston University Henry M. Goldman School of Dental Medicine; visiting professor of oral and maxillofacial imaging and continuing education at the University of Southern California School of Dentistry in Los Angeles; and adjunct professor of restorative dentistry at The University of Texas Health Science Center at San Antonio. Dr Goldstein has presented continuing education courses at more than 20 universities, lectured at more than 400 dental meetings around the world, written extensively, and produced numerous programs for television. He is cofounder and past president of the American Academy of Esthetic Dentistry; past president of Alpha Omega International Dental Fraternity, the Fifth District Dental Society in Atlanta, and the International Federation of Esthetic Dentistry; and a member of the International Academy of Gnathology and the American Academy of Fixed Prosthodontics. He is the recipient of numerous awards.

8:45 AM–9:30 AM

### Compromised Dentition: Clinical and Technical Challenges

*Robert R. Winter*

Diagnosis and treatment planning for the patient who presents with compromised dentition is critical to the long term success of the restoration. Evaluation of the periodontium, structural integrity of the teeth, and occlusal considerations will determine which treatment modalities are necessary. This in turn will determine the sequencing of treatment. Close interaction and communication with the dental laboratory are essential, as are the restorative materials selected. The ultimate goal of the treatment is to have predictable functional and esthetic outcomes.



**Robert R. Winter, DDS**, maintains a private practice limited to prosthodontics in Newport Beach, California, and is a member of the graduate prosthodontics faculty at the University of Washington.

He is the founder of the Oral-Facial Design Center in Newport Beach, where he teaches limited-attendance courses for dentists and technicians, and the co-owner of Esthetics By Design, a dental laboratory. Dr Winter has taught more than 400 didactic, clinical, and technical courses throughout the world. He has published numerous articles and sits on the advisory boards of the *Journal of Esthetic Dentistry* and *Dental Dialogue*. He is a member of the American Academy of Restorative Dentistry, the American Academy of Esthetic Dentistry, the American College of Prosthodontists, the International College of Prosthodontics, and the International College of Dentists.

10:00 AM–11:00 AM

### Conservative Esthetic Dentistry: A Clinical Challenge

*Thomas F. Trinkner and Matthew Roberts*

With today's new ceramic and bonding technology, how do we optimally treat our patients in order to meet their esthetic and functional needs? Our goal is to satisfy the patient's esthetic expectations while pursuing a minimally invasive treatment plan. Sometimes the most conservative treatment may achieve all of the restorative goals, while in other cases, treating too conservatively may lead to esthetic compromises such as overcontouring or problems with long-term color matching of the restorative material and the uninvolved tooth structure. Judgment calls must be made, weighing the needs of the patient and advantages of various treatment modalities. This presentation will discuss cases that demonstrate an extremely conservative approach, as well as those treated more aggressively, and then examine the thought process behind these choices.



**Thomas F. Trinkner, DDS**, maintains a private practice in general dentistry in Columbia, South Carolina. He lectures nationally and internationally on esthetic and functional dentistry and teaches hands-on courses for dentists and ceramists. Dr Trinkner has published several articles, esthetic dentistry, is the editor of the *Journal of the American Academy of Cosmetic Dentistry*, and serves on the editorial board of *Practical Procedures and Aesthetic Dentistry* and the advisory boards of several journals.



**Matthew Roberts, CDT**, is the founder of CMR Dental Laboratory in Idaho Falls, Idaho, and of Team Aesthetic Seminars. Mr Roberts lectures nationally and internationally and has worked with many leading clinicians. He is an accredited member of the American Academy of Cosmetic Dentistry and serves on the editorial boards of many leading dental and laboratory journals.

## SESSION I: EXTENSIVE REHABILITATION (continued)

*Moderator: Gerard J. Chiche*

11:00 AM–12:00 PM

### Clinical and Technical Guidelines for Esthetic Rehabilitation

*Mauro Fradeani and Giancarlo Barducci*

The presentation will demonstrate the essential relationship that must exist between the clinician and the dental technician for esthetic and functional success. It is fundamental that both parties have a definitive vision of the end result, especially in the rehabilitation of very complex cases. Proper esthetic and functional analysis, correct data transmission to the laboratory regarding the occlusal plane orientation and inclination, and other important esthetic and functional parameters allow the achievement of predictable, successful rehabilitation in both natural tooth and implant cases. The proper selection of ceramic material will play a fundamental role in optimizing the final esthetic result.



**Mauro Fradeani, DMD**, is president of the European Academy of Esthetic Dentistry and past president of the Italian Academy of Prosthetic Dentistry. He has taught extensively in Italy and abroad on periodontal prosthesis, implants, and esthetic dentistry and is a visiting associate professor at Louisiana State University School of Dentistry's prosthodontics department. Dr Fradeani is the author of *Esthetic Rehabilitation in Fixed Prosthodontics* (Quintessence, 2004) and a member of the American Academy of Esthetic Dentistry and the American Academy of Fixed Prosthodontics. He maintains a private practice limited to prosthodontics and esthetic dentistry in Pesaro and Milan, Italy.

*Rehabilitation in Fixed Prosthodontics* (Quintessence, 2004) and a member of the American Academy of Esthetic Dentistry and the American Academy of Fixed Prosthodontics. He maintains a private practice limited to prosthodontics and esthetic dentistry in Pesaro and Milan, Italy.



**Giancarlo Barducci, MDT**, owns a dental laboratory in Ancona, Italy. He is a past president of the technical section of the Italian Academy of Prosthetic Dentistry and is a member of the Italian Society of Dental Technicians. In addition, he is the author of numerous articles in international dental journals.

1:30 PM–2:30 PM

### The Complex Case: Simplification by Perfect Treatment Planning and Choice of Materials

*Konrad H. Meyenberg and Walter M. Gebhard*

This presentation will demonstrate a clinical concept for achieving predictable esthetics in complex perioprosthodontic cases. Today, the esthetic standards of the white and red intraoral zone are well defined. The creation of a believable, natural, and healthy-looking appearance is the aim not only of oral esthetics but also of modern dentistry in general. Periodontally compromised patients, therefore, are a special challenge. They need first and foremost an efficient and synoptic treatment plan that includes the dental technician in order to create the esthetic frame for the prosthetic reconstruction in a functionally and biologically acceptable environment. A selection of complex cases from single tooth implants to complex tooth- and implant-supported reconstructions will be presented to illustrate the various treatment options and to emphasize the effectiveness of a team approach that includes both dentists and dental technicians.



**Konrad H. Meyenberg, Dr Med Dent**, maintains a private practice in Zurich, Switzerland, limited to esthetic reconstructive dentistry. He is a senior lecturer in the crown and bridge departments of the University of Zurich, the University of Basel, and the University of Berne dental schools. He has spoken at numerous international congresses and has published numerous articles in the fields of esthetic dentistry, perioprosthodontics, and implant prosthodontics. Dr Meyenberg is an active member of the European Academy of Esthetic Dentistry, the Academy of Osseointegration, and the Swiss Society of Reconstructive Dentistry. He is a certified specialist for reconstructive dentistry of the Swiss and European dental societies and serves on the editorial boards of *Practical Procedures & Aesthetic Dentistry* and the *Journal of Implantologie*.



**Walter M. Gebhard**, a German native, began his career as a dental technician in Germany in 1977. In 1983, he moved to Italy to serve as the chief technician in a dental office. He moved to Zurich, Switzerland, in 1987 to work in a laboratory owned by Alwin Schöneberger, where he remained until 1990. In 1994 he established his own laboratory in Zurich. Mr Gebhard is a frequent speaker at dental technology meetings.

## SESSION II: CHOICE OF CERAMIC SYSTEMS I

*Moderator: Avishai Sadan*

3:15 PM–4:00 PM

### Zircon Ceramics: Bridge to the Future

*Edward A. McLaren and Shane N. White*

The new millennium has brought many advances in dental ceramics. High-strength ceramics have evolved to the point that predictable clinical success has been documented for several systems, especially in the anterior region. Clinical success for high-stress posterior areas or for posterior fixed partial dentures has been less predictable and minimally documented. Newer ceramics with monophasic ceramic core systems have the potential to be used predictably in the posterior regions for single crowns and for three-unit fixed partial dentures. This presentation will discuss these new ceramic systems designed for anterior and posterior use. Microstructural differences between ceramic systems and critical material and processing issues that affect fracture potential will be discussed, and clinical and laboratory guidelines and esthetic enhancements for the use of these ceramics for crowns and fixed partial dentures will be described.



**Edward A. McLaren, DDS**, maintains a private practice limited to prosthodontics and esthetic dentistry in which he does his own ceramics. He is the director of the UCLA Center for Esthetic Dentistry and the founder and director of the UCLA School for Esthetic Dental Design. Dr McLaren also has an appointment in the Biomaterials and Advanced Prosthodontic Department and serves on the faculty

of the University of Oregon Dental School. He has presented numerous lectures, hands-on clinics, and postgraduate courses on ceramics and esthetics nationally and internationally.



**Shane N. White, BDentSc, MS, MA, PhD**, is an associate professor and chairman of the Section of Endodontics at the UCLA School of Dentistry and maintains a part-time endodontic practice. He provides a research focus for the UCLA Center for Esthetic Dentistry and is also a faculty member at the Center for Craniofacial and Molecular Biology at the University of Southern California School of Dentistry.

Dr White is the recipient of several major research awards. He has authored numerous research papers and abstracts and given more than 200 invited scholarly presentations.

4:00 PM–4:45 PM

### Functional Esthetics with Bonded Ceramics: Outcome Prediction and Tooth Preparation

*Pascal Magne*

Clinicians who experience complications with bonded porcelain restorations (BPRs) often report function as the main cause of failure. It appears today that failure scenarios have been scientifically identified; they undermine the importance of function in the failure mechanism but underline the importance of the adhesive protocol itself. Data with the longest observation time for BPRs have been provided by Friedman, who reported 7% of complications (porcelain veneers) over 15 years of clinical service. This small percentage of failure, which is reported in most clinical trials, will be analyzed and explained in view of the latest scientific evidence.



**Pascal Magne, PD, Dr Med Dent**, is associate professor and director of the Esthetics Department at the University of Southern California and a former visiting associate professor at the Minnesota Dental Research Center for Biomaterials and Biomechanics at the University of Minnesota. He has published many articles and delivered numerous international lectures and continuing education courses in the fields of

esthetics and adhesive dentistry. He is the author (with Urs Belsler) of *Bonded Porcelain Restorations in the Anterior Dentition* (Quintessence, 2002).

4:45 PM–5:30 PM

### Perioprosthodontics in Modern Aesthodontics: Minute Details—Major Influence

*Nitzan Bichacho*

The ultimate test of a successful dental restoration is the long-lasting health of the surrounding soft tissues, which should be achieved predictably in every restorative treatment. This lecture will depict cutting-edge treatment modalities to obtain optimal conditions, using innovative techniques and ceramic materials for functional and natural-looking restorations. Diverse treatment plans and step-by-step clinical procedures will be explored, from diagnostic models to provisional restoration therapy to the optimal definitive restorations. Cases of restored natural teeth, pontics, and implant restorations in the esthetic zone, where the soft tissue topography has been redesigned to its optimal condition, will be analyzed and discussed.



**Nitzan Bichacho, DMD**, is a professor of prosthodontics and founding member of the Ronald E. Goldstein Center for Aesthetic Dentistry and Dental Materials Research at Hebrew University-Hadassah of Jerusalem. He is past president of the European Academy of Esthetic Dentistry and scientific editor for *Practical Procedures & Aesthetic Dentistry*. He has published and

lectured throughout the world and maintains a private practice limited to fixed prosthodontics and implant therapy in Tel Aviv, Israel.

## SESSION III: CHOICE OF CERAMIC SYSTEMS II

*Moderator: John W. McLean*

7:45 AM–8:00 AM



**John W. McLean, FDSRCS (Engl), IVIDS (London), DSC (LSU), Dr Odont (Lund)**, was responsible for the development of the glass-ionomer and cermet cements for clinical use in his capacity as clinical consultant to the Laboratory of the Government Chemist. With the National Research Development Corporation, he also patented the aluminous porcelains for jacket crown construction. He was

responsible for the introduction of Vitadur, for which he was made an Officer of the Order of the British Empire and awarded the Tomes Prize. Dr McLean is the recipient of numerous international awards. In 2002, he received the first "Lifetime Achievement Award" bestowed by the ISC in recognition of his devotion to the development of new ceramic materials and the many innovative lectures he presented at previous ISC meetings. Dr McLean is the author of *Science and Art of Dental Ceramics* (Quintessence, 1979, 1980) and coauthor of *Glass Ionomer Cement* (Quintessence, 1988). He is a consulting professor in fixed prosthodontics and biomaterials at Louisiana State University and a past president of the British Dental Association. Dr McLean founded the ISC and chaired the inaugural meeting in 1982, which was held in New Orleans.

8:00 AM–9:00 AM

### Laboratory-Processed Composites: What Works and What Does Not Work

*Didier Dietschi and Roberto Spreafico*

Composite resins have replaced ceramics in many situations, especially for the fabrication of indirect restorations such as inlays, onlays, and overlays. Composites today not only can equal the esthetic quality of ceramics for these indications, but they also offer many advantages, such as better fatigue resistance and practicability, and are better adapted to modern concepts of operative dentistry. The use of fibers may extend the indications of composite resins to short-span fixed partial dentures or full crowns. However, such indications remain mostly experimental. What is of primary concern is to adapt cavity preparation and handling of hard tissues to adhesive cementation techniques. This presentation will provide an overview of decision criteria for the treatment of large caries lesions in posterior teeth and the selection of restorative materials and will provide a comprehensive description of clinical procedures.



**Didier Dietschi, DMD**, is a part-time senior lecturer in the Department of Restorative Dentistry and Endodontics at the University of Geneva, Switzerland, and maintains a part-time private practice dedicated to restorative and esthetic dentistry and periodontics. He lectures on adhesive and esthetic restorations and chemical and conservative treatments of discoloration. He is the coauthor of *Adhesive Metal-Free Restorations*

(Quintessence, 1997).

9:00 AM–9:45 AM

### Indications and Limitations of High-Strength Ceramics

*Avishai Sadan and Markus B. Blatz*

The introduction of high-strength alumina-based all-ceramic systems in the last 15 years enabled clinicians to utilize some of the inherited advantages of all-ceramic restorations in a simplified manner. These systems can also serve as an introductory tool to all-ceramic dentistry at the undergraduate level. However, the strength of these restorations does not eliminate the need for careful treatment planning and a thorough understanding of the limitations of these materials. The presentation will provide guidelines for clinical implementation of these materials on natural teeth and dental implants and review possible limitations and clinical dilemmas associated with their use.



**Avishai Sadan, DMD**, maintains an intramural practice limited to fixed and implant prosthodontics. He is the editor-in-chief of *Quintessence International* and *Quintessence of Dental Technology* and serves on the editorial boards of several other journals. Dr Sadan is a member of the American College of Prosthodontists, the Academy of Osseointegration, the European Academy of Esthetic Dentistry, and the Omicron Kappa Upsilon National Dental Honor Society. He has lectured nationally and internationally on esthetic and implant dentistry.



**Markus B. Blatz, Dr Med Dent**, is a full-time faculty member and director of research in the Department of Prosthodontics at the Louisiana State University School of Dentistry in New Orleans. Dr Blatz is associate editor of *Quintessence International* and *Quintessence of Dental Technology* and serves on the editorial boards of the *Journal of Esthetic and Restorative Dentistry*, the *Journal of Adhesive Dentistry*, and *Practical Procedures & Aesthetic Dentistry*. He is a member of many professional organizations and has published and lectured extensively on various facets of restorative dentistry, implantology, and dental materials.



**Roberto Spreafico, DM, DMD**, maintains a private practice in Busto-Arsizio, Italy. He is an active member of the European Academy of Esthetic Dentistry and conducts a number of esthetic dentistry courses in Italy and abroad. He is the coauthor of *Adhesive Metal-Free Restorations* (Quintessence, 1997), and several clinical papers on esthetic dentistry.

## SESSION III: CHOICE OF CERAMIC SYSTEMS II *(continued)*

*Moderator: John W. McLean*

10:15 AM–11:00 AM

### All-Ceramic Achievements for Esthetic Restorations

*Daniel Edelhoff*

A fundamental principle in replacing missing tooth structure or missing teeth is the restoration of function and esthetics at minimal biologic cost. The introduction of silica-based all-ceramic materials and adhesive cementation techniques has enabled innovative preparation designs and outstanding esthetics for single-tooth restorations. The reliable bond to enamel achieved with the adhesive technique has greatly impacted the retention of enamel, resulting in significant preservation of tooth structure. The combination of highly translucent silica-based ceramics and resin composite cements has launched a whole new era of restorative treatment options like porcelain veneers. Despite the constant improvements of optical and mechanical properties, glass-ceramic restorations are still strongly limited to single-tooth restorations as well as, under certain restrictions, to short-span fixed partial dentures in the esthetic zone. Due to the mechanical properties of new high-strength oxide ceramics such as purely sintered aluminum-oxide and partially stabilized zirconium-dioxide ceramics, long-term reliability has significantly improved, facilitating the clinical application of all-ceramic root canal posts and implant abutments, as well as frameworks for longer-span fixed partial dentures, also for the posterior region. Given the increasing variety of all-ceramic systems, this presentation will provide proven treatment concepts based on clinical studies, including correct material selection dependent on the individual clinical situation.



**Daniel Edelhoff, CDT, DMD, PhD**, is an associate professor in the Department of Prosthodontics at the University of Aachen, Germany, and a former visiting professor at the Dental Clinical Research Center of the Oregon Health & Science University in Portland. He is a certified specialist in prosthodontics and a member of the German Society of Dental Prosthetics and Material Sciences (DGZPW). His research interests include all-ceramic fixed partial denture systems, implant abutment systems, post and core build-ups, and adhesive dentistry.

11:00 AM–12:00 PM

### Three-Dimensional Management of Color in the Esthetic Zone: Selecting Your Materials and Techniques of Choice

*Alan V. Sulikowski and Aki Yoshida*

The present state-of-the-art of esthetic dentistry, coupled with increasing patient expectations, continually challenges the restorative dentist and dental technician. The addition of new materials increases the level of complexity in the decision-making process. This presentation will introduce the concepts of light behavior and volumetric esthetic space. A systematic approach to analyzing the three-dimensional management of color focusing on the dimension of depth and centered on tooth preparation and material selection will also be presented.



**Alan V. Sulikowski, DMD**, maintains a private practice limited to prosthodontics in Cambridge, Massachusetts. He is fellow of the ITI World Group and a member of the Academy of Osseointegration and the American College of Fixed Prosthodontics. Dr Sulikowski's research focuses on dental implants and esthetics in fixed prosthodontics, and he has published articles and lectured nationally and internationally on both of these topics.



**Aki Yoshida, CDT**, is the owner of Gnathos Dental Studio, Aki Yoshida Inc, in Weston, Massachusetts. In addition, he serves as a technical instructor in the Department of Post-Graduate Prosthodontics at Tufts University in Boston, an adjunct faculty member of the UCLA Center for Esthetic Dental Design, and an instructor for Noritake Dental Supply USA. Mr Yoshida has presented numerous hands-on demonstrations and classes throughout the United States and Europe on porcelain-fused-to-metal anterior restorations, porcelain laminate veneers, and internal staining. He is a four-time Masterpiece Technician in the Japanese *Quintessence of Dental Technology*, and he has published several articles on anterior esthetic restorations in the US version of *QDT*.

**SESSION III: CHOICE OF CERAMIC SYSTEMS II** *(continued)**Moderator: John W. McLean***1:30 PM–2:30 PM****Esthetic Dentistry: A Jigsaw of Complexity . . . Putting It All Together***David A. Garber and Pinhas Adar*

Esthetics is not simply about restorative dentistry. Today, it utilizes restorative dentistry in conjunction with periodontics, orthodontics, and implant dentistry, as well as ceramics, because esthetics in 2005 is about beauty. Dental esthetics by design, not chance, requires a relationship between the patient, clinician, and ceramist. All three parties need a definitive vision of the desired end result, satisfying the elements of smile design and complementing this formula with new appropriate laboratory technology. What product to use, where to use it, and how to use it most effectively are the essential tenets of success. This team-driven program will incorporate a specifically defined, sequential treatment protocol with innovative techniques and a plethora of new restorative products critical to satisfying the public's growing demand for smile enhancement.



**David A. Garber, DMD**, is professor of periodontics and oral rehabilitation at the Medical College of Georgia School of Dentistry and serves on the faculties of the Department of Prosthodontics at Louisiana State University in New Orleans and the Department of Restorative Dentistry at the University of Texas in San Antonio. He is the co-author of *Imaging in Esthetic Dentistry* (Quintessence, 1998), *Porcelain and Laminate Veneers* (Quintessence, 1998), *Complete Dental Bleaching* (Quintessence, 1995), and *Porcelain and Composite Inlays and Onlays* (Quintessence, 1993).



**Pinhas Adar, MDT, CDT**, practices, teaches, and conducts research from his laboratory in Atlanta, Georgia, specializing in the many facets of porcelain esthetic restorations on both natural teeth and osseointegrated implants. Mr Adar serves on the advisory board of the Amara Institute and on the editorial boards of the *Quintessence of Dental Technology*, the *Journal of Esthetic Dentistry*, and *Collaborative Techniques*. Mr Adar is the author of several book chapters and numerous magazine articles and is the co-author of the upcoming book *Porcelain Laminate Veneers—An Esthetic Essential* (Quintessence).

**2:30 PM–3:15 PM****Fundamentals Criteria for a Perfect Esthetic Integration***Dario Adolfi*

Technological advancement has greatly affected all fields of human activity. Esthetic dentistry should take advantage of these developments in order to improve the esthetic expectations for our patients. However, it must be remembered that the basis for this kind of dentistry is a total comprehension and understanding of the esthetics of natural teeth, following the esthetic checklist to improve the esthetic outcome.



**Dario Adolfi, DDS**, is director of CeramoArt Ceramic Dental Training Center in São Paulo, Brazil, where he also maintains a full-time private practice limited to esthetic dentistry. Dr Adolfi lectures internationally and is the author of *Natural Esthetics* (Quintessence, 2003).

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