Microscope in Endodontics 2020: Present and Future
Enrico Casai, DDS
Course Description: The purpose of the lecture is to deepen the use of magnification in the endodontic field and its advantages. Through an historical review will be emphasized the incredible progress that is driven by magnification up to the Operating Microscope. Thanks to this technology equipment dentistry can perform operations with better predictability such as removing post, fractured instrument, treating perforations or in the endodontic surgical field. Finally, we will try to look into the future by thinking about what we can still expect in the microscope endodontic field.
Learning Objectives:
- Learn the main advantages in Microscopic Endodontic
- Learn how to better use the Microscope in different fields of endodontics from diagnosis to instruments or posts removing
- Understand the real potential of strong endodontics under microscope

Microscopopal/Endodontic: From Theory to Practice
Bertrand Khayat, DDS and Guallema Jounany, L.DD.
Learning Objectives:
- Fully understand the potential of the operating microscope in Endodontic Microsurgery
- Identify and address anatomical variations with the use of the operating microscope
- Improve the long-term success of endodontic procedures during the surgical procedure

There is Nothing New Under the Sun. Lasers.
The Next Generation
Claudia Cotca, DDS, MPH
Course Description: The lecture will review the application of optical physics laws since inception and application in dentistry within medical science. Reflective of this, selected cases will be reviewed and demonstrate the extraordinary unique-sense and tissue-interaction, and future application implications. Additionally, it will introduce a select few innovative cutting edge capabilities of leading global laser laboratories as strategically featured innovation or already launched prototypes to custom high-level business client procurement.
Learning Objectives:
- Understand the application of optical physics to dentistry, specifically the unique aspect of optical sense of tissue interaction
- Learn to appreciate how the future of laser technology is evolving including developing unique cutting edge laser application development currently featured in select global laser laboratories and facilities
- Learn and appreciate the adaptation and variation of laser technology to interdisciplinary dentistry case selection

Microscopic Dentistry of Dental Hygienist
Yukina Sugiyama
Course Description: In a dental treatment, it's key point to success when 3 different profession, dentist, hygienist, and patient, works together. By understanding the knowledge, we can share the vision within the team in order to satisfy dental hygienists is profession on prevention, Oral Hygiene Instruction (OHI), and initial periodontal therapy on a daily basis. And the use of a microscope by dental hygienists would improve the quality of those works.
Learning Objectives:
- How the microscopic become effective in the work of a dental hygienist
- Patients HATE Traditional Dentistry! WHY!
- Give 'em what they want-and get paid for it!

Ange Willa
Course Description: I wish I had found your practice sooner! Why doesn't every dentist do dentistry this way? Why was my tooth ground and crowned when there was another option? Why wasn't I given a choice? We hear these statements every single day in our microscope-based practice. The fears, the anxiety, the discomfort, the broken trust. Educating and Heart and brain breaking. Pay a moment to consider this: every time you treat a patient, you are making a lifelong footprint in their health. Many times, this footprint is irreversible. Permanently. Before you pick that handpiece and leave your patient, join us in this exploration why your patient really expects. Patients have traditions, multiple fillings needing bigger fillings, the ground and crowned routine, root canals, extractions...implants. The mind-enduring and associated with terrible dentistry. Are you afraid to design a treatment plan that is the best for your patient simply because ignorance can’t understand it or think you can’t pay for it? Do you feel any less smart or any less of a technician if you don’t have the education required to operate outside of the scope of traditional dentistry? Do you and your team have a valid belief that every patient has the right to choose longevity and quality over cost and tradition? Join us as we explore the nays and doubts of creating a patient-focused, behaviorally oriented microscope-based practice that leaves a life changing healthy footprint in the lives of your patients.
Learning Objectives:
- Attendants will learn and discuss the essential characteristics that determine patient acceptance of a health-based treatment plan
- Attendants will learn the "WTH" of microscope-based dentistry
- Attendants will learn to educate patients to appreciate the value of ultrasonic micro-braced dentistry
- Attendants will learn to attend and keep the "right" patient, not just a lot of patients
- Attendants will attend a personalized game plan for their office

Seeing is Believing: Application of Optical Coherence Tomography in the Research and Practice of Dentistry
Ali Reza Sadr, DDS, PhD
Course Description: Dental micro-surgical dentistry has made important progresses, travels enhancements in material science, technology and clinical techniques. Dental bonding revolutionized the shape and content of clinical dentistry, preventing a strong and minimally invasive alternative to the traditional materials. Our present group has promoted 3D high-resolution in-depth real-time imaging using Optical Coherence Tomography imaging and analytical methodologies to detect and monitor dental defects such as caries at various stages, cracks and compromised restoration integrations. These visual observations, not only ever observed before, lead to reidentification of clinical intervention of products such as biocomposites and bioceramics.

Optimized Periodontal Regeneration for Orthodontics (DPO) Expands Indications for Orthodontic Treatment by Completely Regenerating The Gingival Recession
Junichi Watahiki, DDS Ph.D.
Course Description: A prospective study that adult orthodontics might induce complications in periodontal tissue. Further, another report demonstrated long-term progression of gingival recession after orthodontic treatment in adults. Root Geoverse Procedure with connective tissue graft has shown beneficial effects for the gingival recession. However, Root Geoverse cannot completely regenerate periodontal tissue with hard tissue at the gingival recession site so the orthodontic patients had already a gingival recession, we could not take the effective way. Therefore, we developed a new surgical procedure called "Optimized Periodontal Regeneration for Orthodontics (DPO)" that can completely regenerate periodontal tissue with hard tissue in severe gingival recession and reported on International Journal of Periodontics & Restorative Dentistry in 2019. I would like to show some interim orthodontic cases used DPO using a microscope.

Prosthodontic Treatment Workflow Utilizing Microscope: A Case Report
Yusuke Takayama, DDS
Course Description: In the workflow of prosthetic treatment, it commonly starts from the examination and diagnostic procedures, treatment planning, cognition of patient expectations, planning of provisional restoration, impression, try-in of the restoration, cementation and removal of excess cement. And the speaker uses the good results in prognosis when each step worked through both macro and micro viewpoints.
Learning Objectives:
- In this lecture, from the standpoint of a general dentist uses microscope on a daily basis, the speaker will introduce the treatment approach when microscope was used in a series of prosthetic treatments through one clinical case.

Understanding Platelet Rich Fibrin: From Biological Background to Clinical Indications
Richard J. Miron, DDS, BMSc, MSc, PhD, DMD
Course Description: The use of platelet concentrates has a long history of use in various fields of medicine in an effort to benefit patients, including, hair restoration, fat grafting, and treatment of keloids. One major clinical indication of this type has involved the use of platelet-rich plasma (PRP) in the treatment of sports injuries. More recently, the development of a liquid PRP has provided a new formulation of liquid PRP without using anti-coagulant factors that may specifically be combined with currently available bone biomaterials favoring particle stability, angiogenesis, and tissue integration. This talk will highlight the recent advancements made with respect to the new formulations of platelet concentrates including their use in the treatment of cardiac and peripheral vascular disease. In addition, this lecture will review the use of PRP and PRP-like formulations in various clinical indications in a variety of medical, surgical, and orthopedic applications.

Visualizing Polymerizations Shrinkage & Stress
Matthew Najjar, DDS
Course Description: This course will provide detailed and specific information on how the restoration process can create beautiful, biocompatible, and long-lasting posterior restorations without destroying the tooth with full-crown coverage preparation. Biomimetic restorative techniques have been developed that make it possible to create materials that closely mimic the oral environment. The materials have been designed to match the tooth and reproduce that architecture with modern materials at hand today. The student will walk step by step procedures and be enlightened to the materials and techniques to be successful.
Learning Objectives:
- The student will learn the biomimetic techniques for posterior tooth preparation
- The student will learn the materials needed to create bonds strengths to natural tooth structure that real the bonds within the tooth.
- The student will be able to create restorations that have a biological seal and biological base.
- The student will be able to use the techniques to prepare the ceramic restoration for bonding to the preparation.

Macro and Micro Aesthetics, Face to Finessse
Laurence R. Rifkin, DDS
Course Description: It’s said ‘The Whine is the sum of parts’. Social aesthetics is a science and an art. Therefore, if we try to truly coreface beauty and not just correct disability or smile makeovers that ignore the soft tissue frame around our mouth, we must consider both the hard and soft tissues that are the elements that our faces are comprised of. Additionally, we must never forget that our treatments must be biologically sound and diagnosis precision execution. Optimal visual appearance is a current make up and the fundamentals of aesthetics treatment requires a complete evaluation of the whole patient. The aesthetic and clinical reasoning is a natural and behavioral sub-specialty of medicine. As such dental professionals must address the bacteria,

MIRIOLOGY AND HEALTH
MIRIOLOGY is also a biologically and functionally based sub-specialty of medicine. As such dental professionals must address the behavior, patient's life style and overall health in order to achieve the best aesthetic result. The patient’s health, mood and overall health will impact the final aesthetic result. The patient’s health, mood and overall health will impact the final aesthetic result.

Etiology and Clinical Management of Surgery Complications Related to Implant Procedures
Thomas G. Wiedemann, MD, PhD, DDS
Course Description: Despite the well-documented high predictability, long-term and high-success rate of dental implant prosthodontics, complications occur on a regular basis. Therefore, implant therapy has led to a revolution of the field. Now many clinicians offer implants as a variation to partial and complete edentulism and the procedures are no longer limited to specialists. Problems with implants have been rising as more clinicians with no advanced training and skills are performing these procedures. Consequently, complications may be easily missed and difficult to correct, while others will be more significant and result in implant loss, permanent damage of adjacent anatomical structures or even life-threatening. Considering the number of implants placed per year to be placed in the United States alone and it is estimated that more than one million implants will require some type of corrective intervention in the next year as a result of implant failure and these related complications, this lecture will present a wide range of clinical situations and cases as well as a review of the literature in order to have an overview on the causes of implant failures, typical intra- and postoperative complications with severe adverse outcomes leading to medical emergencies with potentially life-threatening complications- including dehydration, emergency treatability or intensive care hospitalization.
Learning Objectives:
- Assess, anticipate and manage common complications associated with implant procedures
- Understand the patient's role in determining optimal implant treatment
- Understand that oral surgeons and dentists, not just more skilled and experienced in implant surgery, must be at all times aware of rare, unexpected and severe complications, in order to promptly plan an adequate emergency intervention.
**Microscope in Endodontics 2020: Hand’s-On**
Enrico Cassai, DDS

**Course Description:**
The purpose of the workshop is to allow each participant to understand and learn the operation of a microscope at its best. During the workshop, each participant will learn how to hold a comfortable and correct position to use the microscope in everyday clinical practice and how to improve and speed up operations with the assistant. Every participant will be trained with the microscope in order to improve one’s skill. A final exercise, each participant will experience the advantages given by the microscope while removing a fiber post from a canal with ultrasonic tips and while-advancing an apex with MTA.

**Learning Objectives:**
- Learn the main positions and ergonomics in Microscopic endodontics
- Improve the skills with a microscope doing some exercises
- Learn how to take advantage from the microscope to remove a fiber post from a canal in a safe way and how to advance the apex with MTA

**Hands-On: Get the Best out of Your Microscope in Endodontic Microsurgery**
Bertrand Khayat, DDS and Guillaume Jouanny, DDA

**Learning Objectives:**
- Master minor and major techniques specific to endodontic microscopy
- Perform apical resection preparation in the long axis of the canal on 6-9 mm
- Obtain the full length of achieved preparations with longer instruments

**Hands-On: How to Restore The Endodontically Treated Tooth**
ONE DAY LIVE DEMONSTRATION COURSE FOR ENDODONTIST AND RESTORATIVE DENTISTS
Randy Shoup, DDS / Matthew Nejad

**Course Description:**
Everything from scaling the canals to the final restoration. Under the direction of Dr. Randy Shoup, a step-by-step approach along with supported scientifically based principles will be presented, followed by a live demonstration with the techniques described performed on extracted untreated teeth. Learn the process, products and equipment utilized to achieve success in treating the endodontically treated tooth. Learn techniques to utilize immediately and implement into your daily treatment. Attendees are invited to bring their own loops or utilize the available microscope. During the course, demonstration equipment will be available for attendee use.

**Learning Objectives:**
- Understand the principles of bonding to deep dentin with the most current scientific understanding
- Effectively seal the gutta percha filled canals with a composite resin system prohibiting the contamination of the root canal system from oral leakage
- Create a high molecular weight polypropylene fiber scaffolding matrix within the evacuated pulp chamber
- Utilize new composite systems to create a dense and high adhesive core within the tooth
- Analyze and assess the remaining tooth structure; design a final restoration that reinforces the remaining healthy and sound tooth structure.

**Seeing the LIGHT! - Soft and Hard Tissue Lasers in General Practice - Hands-On Workshop**
Glenn A. van As, BSc, DMD

**Course Description:**
In this limited attendance hands-on workshop attendees will see how dental lasers can be utilized to help with treatment outcomes in general practice. Soft tissue (Diode) lasers have become a go-to piece of many dentists’ armamentarium for their ease in tissue management, laser bleeding, soft tissue procedures such as frenectomies and lingual tongue tie release. Hard tissue lasers are able to be used for restorative preparations, as well as conturining of bone. Lasers do provide an alternative to many medications/outpatient clinic use currently by which laser might be the best for their practice. In this “See, Show, Do” hands-on workshop attendees will first see some clinical cases documented through microscopic photography and videography captured by the dental operating microscope. A live demonstration under the scope will show how soft and hard tissue lasers can be used. The latter part of the session will then be used by attendees to try for themselves both soft tissue diode lasers and “All Tissue” lasers while using a table top mounted microscope on pigs jaw. See how lasers can become an important part of the armamentarium for your practice.

**Learning Objectives:**
- Discover the various wavelengths present in dentistry and see how they might be relevant for your practice.
- See how soft tissue diode lasers can be utilized for tissue management and in the delivery of minor soft tissue surgical procedures.
- Realize how “All Tissue” erbium lasers can be used for restorative dentistry and in the ablation of bone.
- Understand how soft tissue laser therapy can be a vital treatment for your surgical cases.
- See how the synergy between lasers and the Dental Operating Microscope exists.

**Advanced Ergonomics in Microscope Dentistry & The Art of Microphotography**
Jorge Zapata, DDS and Juan Carlos Ortiz Hugues, DDS

**Facts and Applications:**
- Introduction to ergonomics in dentistry; hands-on introduction to dental ergonomics
- Operator and patient position: Different models and brands of possible.

**Hands-On:**
- Operator and patient position: Different models and brands.
- Patient’s office: different models.
- Operator’s chair: different models.
- Patient’s chair: different models.
- Researching and recommendations

**Course Description:**
Ergonomics, known as human factors, is a multidisciplinary science concerned with finding ways to keep people productive, efficient, safe, and comfortable while they perform a task. The basic premise is to make the task fit the person, rather than making the person adjust to the task. Dentistry is one of the most demanding professions with a high incidence of musculoskeletal disorders. Many professionals are retiring early because of neck, back, shoulder, arm, and wrist injuries. This course will outline the ergonomic benefits of the surgical microscope in dentistry. It will address appropriate posture while working with the microscope, how to position the microscope, and how to perform under-the-counter in order to work pain-free, efficiently, and without strain. The course will also outline different stools available in the market, the properties of each and how to sit properly.

**Learning Objectives:**
- Learn and apply the principles of ergonomics in dentistry
- Learn about the most ergonomic tools in the market and test them
- Learn how to sit properly with good available stools in the operating in different positions
- Learn the ergonomic benefits of the microscope in dentistry
- Learn how to sit the patient in the operating chair in order to achieve better ergonomic position
- Learn about four-handed dentistry
- Learn how to prevent musculoskeletal disorders & the benefits of microtools

**Modern Atraumatic and Surgical Extraction Techniques, Complications Management, Socket Grafting, GBR and Other In-Office Oral Surgery Procedures for General Dentists**
Thomas G. Wiedemann, MD, PhD, DDS

**Course Objectives:**
The course consists of lectures and hands-on training on porcine mandibles.

**Learning Objectives:**
- Understand and apply non-surgical and surgical techniques used in modern endodontics
- Apply minimal trauma and skill edge-protecting extractions in the general dental practice
- Manage common complications associated with tooth extractions
- Analyze and evaluate surgical difficulty and manage risk assessment, in medically compromised patients who need tooth extractions
- Perform current simple concepts and principles of GBR, including socket preservation, as related to peri-implantological indications
- Perform frequent and common oral surgery procedures in the general dental practice
- Understand and avoid medico-legal issues associated with oral surgery by careful case selection and informed patient consent.