Articulating paper marks are not able to accurately measure occlusal contact force. As a result, dentists struggle with occlusal practice issues daily in finishing prosthetic cases, implant breakage, glass ceramic fractures, and occlusal adjustment treatment. This “guessing” based method cannot successfully control occlusal forces predictably, which leads to prolonged treatment times, material failures, lost productive chair time and inability to treat TMD successfully.

Computerized occlusal analysis is a superior occlusal force measurement technology to employ in the daily clinical practice of occlusion. Dr. Robert B. Kerstein’s lectures and hands-on workshops (with actual patients) share his 30 years’ experience utilizing digital occlusal technology for diagnosing occlusal problems and treating occlusal disease, treating TMD, installing dental prostheses, implant prostheses, and fragile esthetic dentistry.

Recognized as a leading author and researcher in the field of Computerized Occlusal Analysis, Dr. Kerstein has lectured around the world, providing live patient treatment seminars in many hospitals, dental clinics, and educational facilities, both nationally and internationally.

**PRESENTATIONS:**

**Digital Occlusal Technology in Daily Dental Practice: Taking Treatment to the Next Level**

This program will highlight the concepts and techniques required to integrate computer-guided occlusal analysis and treatment procedures into daily dental practice, by describing the numerous applications this technology offers dentists, which can significantly improve their patients’ occlusal therapy outcomes and raise their practice of occlusion to 21st Century Standards.

**Mastering Digital Occlusal Technology: Developing Key Chairside T-Scan User Skills**

Improve your understanding of T-Scan technology and gain chairside skills required for a clinician to obtain optimum patient results. Develop the proper recording techniques and data analysis procedures that guide the occlusal adjustments made to the patient’s occlusion.
Increase clinical results by eliminating Occlusion Confusion!

- Treat TMJ and bite problems more successfully without splints and appliances
- Increase productivity by eliminating remakes and extra visits
- Implement occlusal practices predictably

Over the last decades, materials and techniques have rapidly evolved in dentistry. These advancements, along with a comprehensive understanding of occlusion and function, are a must to be successful in today’s dental practice. This program will highlight some of the concepts and techniques required to integrate sound computer-guided occlusal principals to synergize beauty and function.

Dentists are now able to quantifiably relate articulating paper markings to real-time occlusal contact force data (through computerized occlusal analysis). This information is invaluable in developing natural tooth, prosthetic, and implant occlusal schemes. This course will illustrate the numerous applications that computerized occlusal analysis offers to significantly improve today’s occlusal therapy and raise it to 21st Century Standards.

If Paper Markings Could Talk, What Would They Say?

Published research indicates that articulating paper marks illustrate contact location only. Because they are subjectively observed and not measured, paper marks don’t accurately guide occlusal treatment. Additionally, computers are proving that using patient subjective response to occlusal feel as a measure of occlusal balance is a poor indicator of occlusal precision.

LEARNING OBJECTIVES:

- Understand modern computer-based concepts of occlusion
- Recognize the importance of anterior guidance and measurable posterior disclusion time
- Review the relationship of occlusal findings to the masticatory musculature
- Determining hyperoccluded contacts and treating occlusal force excess, occlusal pain, and cold sensitivity
- Gain the knowledge to design restorations that function within the known, measurably physiologic T-Scan occlusal norms
- Learn how to treat in maximum intercuspation (MIP), where you do all of your daily dentistry and your patient is most natural
- Realize that articulating paper markings are not accurate describers of occlusal force
- Observe the clinical employment of computerized occlusal analysis to precisely optimize the occlusal end results
- Improve prosthetic insertions by analyzing time vs. force measurements to guide occlusal corrections

SUGGESTED FORMAT:
Full- or Half-Day, Keynote, Hands-on Workshop

SUGGESTED AUDIENCE:
Dentists and Team Members

ROBERT B. KERSTEIN, DMD
Digital Occlusal Education
Digital Occlusal Treatment of Chronic Muscular TMD Symptomatology

Research has repeatedly shown that occlusal contacts play a definitive causative role in the etiology of the muscular TMD symptoms. This course will describe the prolonged excursive friction/muscle hyperactivation neuroanatomy that is responsible for the development of chronic TMD muscular symptoms. It will also detail some of the studies that validated this computer-guided occlusal treatment method, while illustrating how to perform this successful TMD therapy that does not require the patient to wear a splint, deprogrammer, orthotic, or appliance.

Learning objectives
- Understand the clinical differences between visual posterior disclusion and measurable immediate posterior disclusion
- Understand how the neurophysiologic etiology of muscular TMD symptoms through the long disclusion time – excursive muscle hyperactivity physiology, creates the ischemic muscle pain commonly observed in TMD patients
- Understand how the T-Scan and BioEMG simultaneously record and illustrate both the excursive friction and the resultant masticatory muscle hyperfunction that causes the ischemia
- Learn how to significantly and permanently lessen excursive muscle hyperactivity and reduce clinical ischemia thru computer-guided occlusal therapy
- Understand how to treat muscular TMD without intraoral orthotics, appliances, mouthguards, and deprogrammers
- Recognize that measured and un-measured occlusal adjustment procedures are NOT the same clinical process for the operator or the patient, and that all TMD therapeutic occlusal adjustment procedures are not “equilibrations”

Digital Occlusal Analysis Implant Applications

It is well documented that occlusal force overload can result in de-osseointegration of dental implants, mechanical failure of implant parts or screws, and fractures of veneered occlusal surface materials. Full arch implant prostheses can be torqued and flexed from aberrant occlusal forces while segmental implant prosthesis often hold up the proper occlusion of their neighboring teeth, because their rigidity makes them absorb too much occlusal force. The digital approach to occlusal analysis offers the clinician significant advantages over other commonly employed occlusal adjustment techniques. By combining a PowerPoint presentation, with actual implant prosthesis recorded occlusal contact digital data, this presentation describes the clinical implant applications of computerized occlusal analysis.

Learning Objectives
- Understand that occlusal force and contact timing simultaneity are not reliably measured with articulating paper marks
- Learn how to employ the digital occlusal analysis with full arch implant prostheses and mixed arches where teeth and implant prostheses reside together
- Illustrate how digital occlusal analysis can be used to force-map and time-sequence occlusal contacts
- Recognize how measured occlusal force corrections on implant prostheses improve longevity, lessen material breakage and optimize patient comfort, post insertion
Using Digital Occlusion Analysis During Prostodontic Case Insertion

When used during prosthesis insertion, digital occlusal technology accurately detects problematic occlusal contacts so a Clinician can target, and adjust, regions of excessive force that can become problematic for the patient comfort. Post-insertion occlusal difficulties greatly impact dental office efficiency, as unwanted “extra occlusal adjustment visits” interfere with the clinicians’ daily schedule, increase frustration and induce stress between the patient and the clinician when the problems persist despite repeated attempts to resolve them with further occlusal treatment. Using digital occlusion technology at case insertion eliminates very common prostheses insertion occlusal problems, and ensures far less office time is wasted on unwanted “extra occlusal adjustment visits”. This presentation will illustrate how digital occlusion can help a clinician to predictably improve all forms of prosthetic case occlusal outcomes.

Learning Objectives:
- Understand that articulating paper marks do not accurately describe occlusal force and contact timing, and that choosing them for adjustment subjectively, based upon their size, has been shown in studies to be a highly unreliable method of selecting contacts for treatment
- See how to employ digital occlusal analysis with full mouth reconstruction, and with fixed and removable prosthetic combinations involving complete dentures and implant overdentures, to install an occlusal force profile that is balanced and centered within the middle of the arches
- Illustrate how digital occlusal analysis can be used to force-map and time-sequence occlusal contacts to establish measurable bilateral simultaneous contacts
- Recognize how measured occlusal force corrections made to crown and bridgework, and fixed and removable prosthetic combinations, can optimize patient comfort post-insertion, thereby lessening the number of unwanted occlusal adjustment visits

Digital Occlusal Technology and Controlling the Overload of Esthetic Restorations

Today’s esthetic restorations are both beautiful and fragile. Protecting them from occlusal force overload is paramount to their long-term survivability, but that is difficult to do when employing traditional occlusal indicators, which have no occlusal force detection capability. By using computerized force and timing data, the clinician can better prolong the life of the fragile esthetic restoration, while greatly improving overall patient occlusal adaptation.

Learning Objectives:
- Understand that brittle adhesive restorations cannot be evaluated occlusally prior to bonding them to place
- Realize that obtaining reliable interocclusal records with un-bonded adhesive restorations increases case errors at insertion, making insertion occlusal adjustments more difficult than in cases where many lab remounts are possible
- Visualize with T-Scan data, the “glancing blow” damaging contact phenomenon. A glancing blow is a fleeting, short duration, high force contact that can readily crack and chip an all-ceramic restoration
- Illustrate how digital occlusal analysis improves porcelain veneer insertion procedures using actual T-Scan data to describe both the adjustment sequences performed and the occlusal force and timing improvements obtained.
Buying a T-Scan does not make a dentist an effective user. Improve your understanding of T-Scan technology and gain chairside skills to obtain optimum patient results.

One must actively train to develop new clinical chairside skills that include:

✓ Proper recording technique,
✓ Proper data analysis procedures, and then
✓ Properly using the data analysis to make measured occlusal adjustments to the patient’s occlusion.

The program offers 3 components to address the 3 Levels of T-Scan Mastery:

Hands-On Recording Session—Learn thorough intraoral recording techniques.

Learning Objectives:
➤ “Self-record” in Turbo Mode your own occlusion to develop your recording skills and choose correct sensitivity settings
➤ Learn how the patient must move to obtain quality mandibular functional data that makes for useful occlusal diagnostic recordings.

Data Analysis and Software Interpretation—Group Data Interpretation

The attendees will review the recorded data as a group, to understand how to read and use the Force vs. Time Graph; the Center of Force Trajectory, and the Timing Analyses Features.

Learning Objectives:
➤ Understand how to apply timing and force data to a patient’s teeth in a series of recordings, to optimize a patient’s prosthetic, implant, or natural tooth occlusal scheme
➤ Recognize how choosing problematic occlusal contacts based upon T-Scan data (instead of “subjectively interpreting” paper marks by their appearance characteristics) is a far more reliable approach to use when treating occlusal problems

Live Patient Treatment—In a clinical setting, attendees will observe a live-patient, computer-guided occlusal treatment session.

A volunteer attendee or an actual patient with occlusal problems will be diagnosed and treated. Patient volunteers are not pre-screened before the program to "select the right case"; rather their occlusal problems are first seen and diagnosed in front of all course participants as part of the learning experience.

Learning Objectives:
➤ Observe proper recording techniques and accurate data analysis that leads to an immediate occlusal diagnosis that then guides the treatment of the patient’s occlusal condition
➤ Recognize how the data is properly used in clinical patient computer-guided occlusal treatment

SUGGESTED FORMAT:
Full- or Half-Day, Hands-on Workshop

SUGGESTED AUDIENCE:
Dentists and Team Members

Robert B. Kerstein, DMD
Digital Occlusal Education
A pioneer and academic science advocate for digital occlusal technology, Robert B. Kerstein, DMD, teaches a measured system which greatly improves the success of bite-related procedures commonplace in every clinical practice by providing predictable, rapid bite comfort for most patients. This measured system lessens breakage and costs associated with remakes while shortening treatment times and reducing wasted chair time.

Dr. Kerstein received his D.M.D. degree in 1983, and his Prosthodontic certificate in 1985, both from Tufts University School of Dental Medicine. From 1985 - 1998, he maintained an active appointment at Tufts as a clinical professor teaching fixed and removable prosthodontics in the Department of Restorative Dentistry. In 1984, Dr. Kerstein began studying the original T Scan I technology, and has since that time, also studied the T-Scan II, the T-Scan III with Turbo Recording, and presently the T-Scan 8 technology.

Dr. Kerstein has conducted original research regarding the role that occlusion and lengthy disclosure time plays in the etiology of Chronic Occlusal-Muscle Dysfunction.

Recognized as a leading author and researcher in the field of Computerized Occlusal Analysis, Dr. Kerstein has published forty-five peer reviewed publications. Additionally, Dr. Kerstein has authored four textbook chapters that highlighted the T-Scan computerized occlusal analysis technology. Recently, he collaborated as Head Editor with 16 international authors to create the Handbook of Research on Computerized Occlusal Analysis Applications in Dental Medicine, which is a 20-chapter treatise on the T-Scan technology's many uses in the differing disciplines of clinical dental practice.

Dr. Kerstein maintains a successful private practice in Boston, Massachusetts, that is limited to prosthodontics, computerized occlusal analysis, and occlusal-muscle dysfunction.
International Meetings
Academy of Computerized Dentistry; Montreal, Canada
American Academy of Craniofacial Pain; Toronto, ON
American College of Prosthodontists; New York, NY
American Prosthodontic Society, Chicago, IL
Argentina Dental Congress; San Martin, De Los Andes
Bilaystok Medical and Dental University Academic Meeting; Poland
Bicocca University; Milan, Italy
BioRESEARCH Worldwide; Milwaukee, WI (multiple)
British Academy of Cosmetic Dentistry; Edinburgh, UK
British Society of Occlusal Studies; United Kingdom
Canadian Academy of Restorative Dentistry (multiple)
Central European Dental Exhibition; Poznan, Poland (multiple)
Conferencia Ontontologica; San Martin de los Andes, Argentina
Czech Republic Academy of Esthetic Dentistry; Czech Republic
Danish Society of Oral Implantology; Denmark
Dentistry Vision; New Delhi, India
Eurocclusion International Congress; Italy
International Academy of Gnathology (multiple)
International Congress of Oral Implantologists (multiple)
International Dental Congress / CA Academy Cosmetic Dentistry; Toronto; ON, Canada
International Dental Show; Cologne, Germany
International Health Fair; Prague, Czech Republic
Japan Association of Cranio-Mandibular Orthopedics; Tokyo, Japan
Korean Academy of Occlusion; Seoul, Korea
Korean Implant Society; Seoul, Korea
Millennium Dental Technologies; Cancun, Mexico
Moscow State Dental University; Moscow, Russia
Pacific Dental Conference; Vancouver, BC
Pan European Dental Congress; Kiev, Ukraine
Polish Association of Craniomandibular Disorders; Poland
Portugal Dental/i3D Congress; Portugal
Thai Implant Association; Bangkok, Thailand
Thai Prosthodontics Society; Bangkok, Thailand
Turkish Dental Association Annual Session
Ukrainian IPST Annual Conference; Budapest, Hungary

National Organizations
Academy of CAD/CAM Dentistry; Orlando, FL
Academy of Computerized Dentistry; San Antonio, TX
Academy of Implant Dentistry; Los Angeles, CA
American academy of Implant Dentistry, Las Vegas, NV
Academy of Osseointegration; Seattle, WA
American Academy of Cosmetic Dentistry (multiple)
American Academy of Head, Neck and Facial Pain; Houston, TX
American Academy of Restorative Dentistry; Chicago, IL
American Dental Association Annual Session
American Dental Implant Association; Las Vegas, NV
American Equilibration Society; Chicago, IL (multiple)
American Prosthodontic Society; Chicago, IL (multiple)
Chicago Dental Society Midwinter Meeting; Chicago, IL
Kois Center Training; Seattle, WA (multiple)
Montana Dental Society Midwinter Meeting; Missoula, MT
Nash Esthetic Symposium; Charlotte, NC
PAC Live (Pacific Aesthetic Continuum); San Francisco, CA (multiple)
Yankee Dental Congress; Boston, MA (multiple)

State and Local Meetings
Academy of CAD/CAM Dentistry; Coronado, CA
Academy of Computerized Dentistry North America; Scottsdale, AZ
Academy of General Dentistry; New Orleans, LA
Arrowhead & Dick Barnes World Symposium; Park City, UT
Buffalo Periodontal Society; Buffalo, NY
Bunting Periodontal Society; Ann Arbor, MI
California Dental Association; Anaheim, CA
Center for Advanced Dental Education; St. Petersburg, FL
Charles J. Jerge Seminar; Myrtle Beach SC
Florida Academy of General Dentistry; Tampa FL
Florida National Dental Congress; Orlando, FL
Forsythia School of Dental Hygiene; Boston, MA
Fort Worth Academy of General Dentistry; Fort Worth, TX
Greater Houston Star of the South Meeting; Houston, TX
Las Vegas Dental Association; Las Vegas, NV
Mayo Clinic; Rochester, NY
Midwest Implant Institute; Columbus, OH
New Jersey Health Professionals Development Institute; River Edge, NJ (multiple)
Pacific Coast Society of Prosthodontists; Portland, OR
St. Paul District Dental Society; St. Paul, MN
Washington D.C. District Spring Meeting; Washington, D.C.
Whitecap Institute; Heber City, UT (multiple)

Study Clubs
Absolute Dental Services Study Club; Durham, NC
Augusta Family Dentistry Study Club; Wichita, KS
Biteplint Study Club (Dr. Steven Smith); Bozeman, MT
Champlain Valley Study Club
Coastal Jaw Surgery Study Club; Tarpon Springs FL
Darien Study Club; Stamford, CT
Dawson Art & Science of Equilibration; St. Petersburg, FL
Dr. Jeff Ganeles Study Club; Boca Raton, FL
Dr. Noel Jackson Study Club; Trenton, MI
Flying Dentists Association (Dr. Kerr Study Club); Rockland, ME
Great Bay Study Club; Portsmouth, NH
Pankey Institute Meeting (multiple)
Seattle Study Club (multiple)
Worthington Dental Study Club; Worthington, OH
Greater Reno Dental Society Study Club, Reno, NV

Dental School Meetings
Albany VA Alumni Day; New York, NY
Harvard Dental School; Boston, MA (multiple)
Tufts University School of Dental Medicine; Boston, MA (multiple)
University of Maryland; Baltimore, MD
University of Texas Health Science Center; San Antonio, TX
University of Texas Health Science Center; Dallas, TX
Texas A&M University, Baylor College of Dentistry, Dallas TX
UCLA Prosthodontic Department, UCLA Dental School, Los Angeles, CA
University of Iowa Prosthodontic Department; College of Dentistry Iowa City, IA