



# VIESID WEB – SUMMER SCHOOL 2021

## PROGRAM

JULY 22<sup>nd</sup> – 25<sup>th</sup>

**VieSID**<sup>®</sup> | Vienna School of  
Interdisciplinary Dentistry  
*The Slavicek Foundation*

M. Schmid- Schwap & B. Sagl: „MRI diagnosis and functional aspects”

**Abstract:**

Imaging methods are a very valuable tool in diagnosis of the morphology of the temporomandibular joint (TMJ). Magnetic resonance imaging (MRI) is the “golden standard” for analysis of anatomy and pathology of the temporomandibular joint - especially in diagnosis of soft tissues. Using special sequences enables even detecting of effusion. In this lecture we will discuss important technical parameters and the practical implementation of the MRI examination of the TMJ. The different assessment criteria position and morphology of condyle and articular disc, effusion and movement capacity will be explained in detail on the basis of patient examples. Moreover, we will discuss methods for the 3D assessment of morphology from MRI as well as future potential improvements of MRI imaging of the TMJ. Lastly, potential connections between mechanical loading and morphological changes will be discussed.



## E. Piehslinger: “*Condylography and MRI in the diagnosis of TMD*”

### **Abstract:**

MRI and Condylography are two non-invasive methods allowing the practitioner to look deeper into structures and functions of the temporomandibular joints. MRI has improved over the decades and now delineates precisely bony and soft tissues of the joints. Especially 3Tesla images show the structures in all three directions of space in all details. Thin slices enable the dentist to distinguish between sagittal, medial and lateral disc dislocations as well as the shape of the disc and bony surfaces. Condylography on the other hand shows the movement of hinge axis in the sagittal, frontal and horizontal planes in the course of time. The standardized functional analysis of the tracings provides the dentist with information concerning quantity and quality of movement as well as characteristics, symmetry and special findings like clicking phenomena. Time curves evaluate the velocity of hinge axis movements and show clearly every acceleration and deceleration. The tracings allow determination of therapeutic positions in patients with joint compression or distraction as well as disc dislocations. They are the basis for determining splint positions. Using the combination of MRI which shows the anatomic structures of the temporomandibular joints in closed and open positions and Condylography which delineates joint movement in time, one can distinguish between muscle and joint pathologies using two non – invasive methods. This provides the practitioner with great opportunities not only in prosthodontic therapy using articulators but also in joint evaluation in pain patients. The combination of MRI and Condylography is also the basis for evaluating therapeutic positions for Craniomandibular Repositioning Therapy (CMR Therapy) in patients with reciprocal clicking (disc dislocation with repositioning). The combination of static (MRI) and dynamic (Condylography) recording is an apt method for diagnosis and evaluation of the therapeutic progress and success of CMR Therapy.



## G. Undt: “Imaging the TMJ surgery”

### Abstract:

Modern imaging technologies play an important role in the diagnosis of temporomandibular joint disorders. Planning of minimally invasive and reconstructive surgical interventions is highly dependent on the quality of radiological data. These data allow three-dimensional simulation of the surgery and the pre-fabrication of patient specific implants.



## D. Singh: “MRI evaluation of patients treated with controlled mandibular repositioning concept”

### **Abstract:**

Magnetic resonance imaging (MRI) is currently the gold standard for describing the position and morphology of the articular disc. MRI is a useful technique to detect internal derangements, as it allows the direct visualization of articular disc in both open and close mouth positions.

Internal derangement is the most common pathology in TMJ which refers to a change in the normal course of movement of the TMJ, including the function of the articular disc. Since the structure and quality of TMJ do not always change in internal derangement, which is different from degenerative joint disease. The most common type of internal derangements are disc displacement of articular disc which can be with or without reduction, the displacement of the disc can be anterior, medial, lateral, anterolateral, anteromedial or even posterior disc displacement.

Dental splints are worldwide well accepted conservative treatment for all types of temporomandibular joint disorders but in literature there is not well-established protocol how to calculate the therapeutic position or in which position the splint has to be fabricated.

In this study 38 internal derangements patients with reducible joint luxation undergone treatment with CMR concept based of Dr Alain Landry’s and VieSID principles and their position of articular disc is evaluated before and after the CMR therapy with help of magnetic resonance imaging.

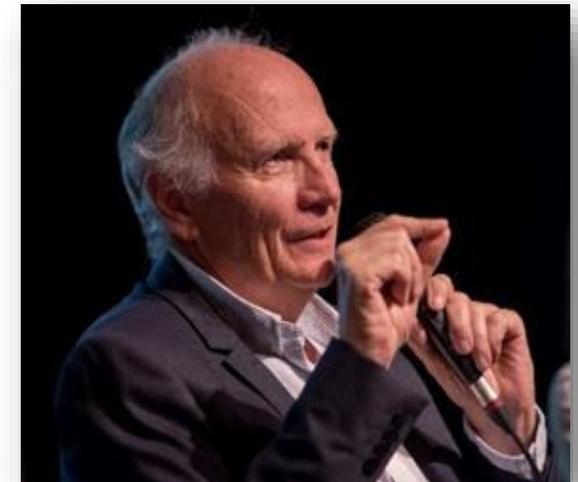


F. Crehange / J.D. Orthlieb: „*Complete denture: occlusal registration and occlusal concept, an original approach*”



**Abstract:**

The teaching of occlusal approach in removable complete denture has been broadly the same for 70 years in a concept widely shared in the world: vertical dimension (VD) around rest posture, phonetic tests, adjustment of large rims in centric relation, camper plane to define occlusal plane and bilateral balanced concept of guidance. A logic of simplicity and efficiency leads to another approach, which if it follows the same chronology, but propose a different way: other references to define the vertical dimension of occlusion, anterior occlusal stop to record the vertical dimension, validation of the reference position, occlusal curves, and canine guidance. This approach will be proposed through a clinical case presentation.



C. Betzl & S. Provencher: “Case presentation & discussion”



*Are there any easy cases out there? - Evaluate every step of the treatment with the same principles, use your network and we will see, that our professional live becomes less difficult. During this case presentation, there will be a live streaming to the dental Technologist of this case.*

**Abstract:**

A mostly myopathic patient underwent splint therapy successfully. An ortho-pretreatment and a final prosthodontic rehabilitation was the treatment plan. The combination of Orthodontics and Prosthodontics can diminish the amount of preparation needs. A principle guided treatment with a one year follow up.



## L. Camargo: “Case presentation & discussion”

### **Abstract:**

The success and stability of the treatment of the masticatory organ will depend on the initial systematic diagnosis, which should identify the causal factor and thus facilitate the approach to orthodontic-prosthetic treatment. After making a complete diagnosis, according to the VieSID protocol, in this clinical case - esthetically very acceptable but with dysfunction - an alteration of the mandibular position was found. The treatment plan began by giving a mandibular therapeutic position, which was evaluated with a bite test and indicated improvement in joint and muscular symptoms. Then it was decided to maintain the new mandibular position with overlays, while, simultaneously, the orthodontic dental movement was started using meaw. Each clinical case requires an exhaustive functional analysis at the beginning, the middle and the end of the treatment, only then will the esthetics and at the same time the correct function of the masticatory organ be maintained.



S. Sato & R. Velasquez & M. Hirose & K. Sugimoto:  
*“Orthodontic treatment of malocclusion in TMD”*

**General Abstract:**

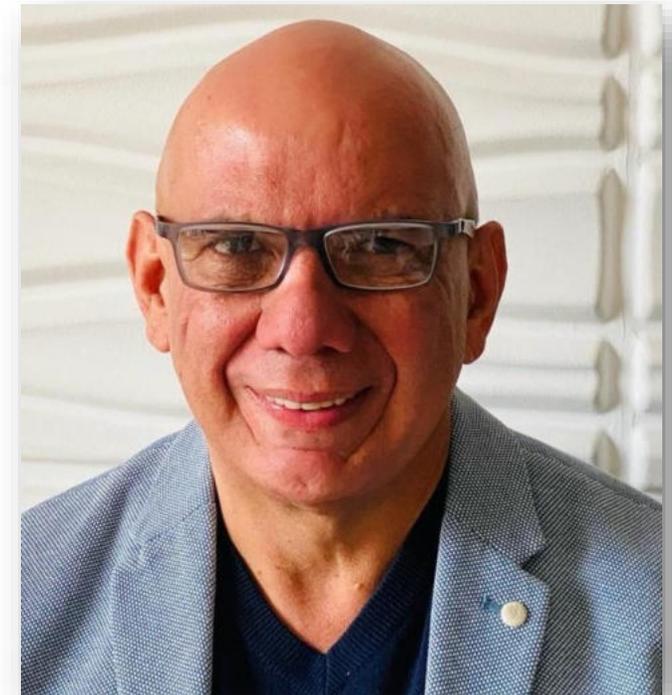
Despite more than 40 years since Farrer WB (1978) reported internal derangement as a pathology of TMJ, we have yet to provide clear guidelines for the treatment of this disease. The main reasons for this are that the concept of physiological mandibular position is not well established, there is a misunderstanding about the relationship between occlusion and the temporomandibular joint, and there is a lack of understanding of the role of masticatory organs in maintaining general health. These issues probably depend on the lack of research in the field of occlusal dentistry and the perception of change in dental education. At this Summer School (2021), we would like to discuss these points regarding the diagnosis and treatment plan of TMD patients and the practical occlusal treatment.

R. Velasquez:

*“Diagnostic Significance of Horizontal Condylar Angle (HCA) in Malocclusions with Degenerative TM Joint Disease”*

**Abstract:**

In recent years, TMD with severe degenerative change is the most critical issue in dental occlusion due to its early onset (juvenile), associated physical symptoms, difficulty in treatment, and decreased QOL. Early detection and treatment of any illness are the basis of medical care. However, early screening of TMD is still tricky because the diagnostic index is not precise. Recently, it has been suggested that HCA may increase as a morphological change of condyle with the progress of degeneration. Therefore, to understand the mechanism of HCA change due to the deviation of the condyle, the HCA of the MLD case was examined as follows. To evaluate the horizontal condylar angle (HCA) in mandibular lateral displacement (MLD). HCA in MLD malocclusions were examined using CBCT data in subjects with MLD and control subjects (Class I without MLD). HCA in joints of control patients and contralateral side joints of MLD patients were not significantly different. The mean HCA on the shifted side was more significant than on the contralateral side (CSS)(P, .001)HCA was significantly larger on the shifted side (SS) than on the (CSS) in skeletal Class I-MLD, Class II -MLD, and Class III-MLD groups (P, .001), indicating that the condyle of SS in MLD was affected. (1) There was no statistically significant difference between HCA in control patients and CSS in MLD patients. (2) HCA was significantly larger on the SS than on the CSS. (3) HCAs on the SS and the CSS in MLD are significantly different. (Angle Orthod. 2021; Published Online Early).



M. Hirose:

*“Examination of Patients with a History of Orthodontic Treatment Complaining of Physical Disorders”*

**Abstract:**

Patients with a history of orthodontic treatment often complain of symptoms such as temporomandibular disorders (TMD), headaches and stiff shoulders, and various indefinite complaints. We investigated what was causing these symptoms after orthodontic treatment. Twenty-three subjects (male: 1; female: 22; average age: 39.3 years), more than 5 years after orthodontic treatment. In addition to the data of cephalometric analysis, condylographic analysis (Cadiax), bruxchecker, a body perception survey sheet regarding physical disorders (TMD symptoms, muscular symptoms, oral symptoms) was used. The subjects were divided into those with no contact marks on the maxillary 6 anterior teeth (Group A) and those with contact marks (Group B) using bruxchecker. Then, the relationship with the symptoms was investigated. We obtained following results. (1) All of the subjects in Group A were subjects who received orthodontic treatment without extraction. (2) The inclination of upper anterior teeth tended to be large in group A. (3) Mandibular anterior tooth inclination tended to be lingual in the subjects treated by premolar extraction in Group B. (4) The occlusal plane (FH-OP) tended to be large in Group A. (5) Regarding the horizontal and the vertical skeletal type, there was no difference between the A group and the B group. (6) Angle of disclusion (AOD) tended to be smaller in group A. (7) Regarding physical disorders, there was no significant difference between groups A and B. It was suggested that orthodontic treatment without tooth extraction tends to lose the occlusal contact of the anterior teeth when the OP is steep. It was also found that physical disorders accompanied regardless of the skeletal type and with or without premolar extraction.



K. Sugimoto:

*“Interrelation Among Canine Occlusal Guidance (COG), Sagittal Condylar Path (SCI) and Bruxism Facet Inclination (BFI) – What is Canine Guidance? Definition Attempt “*

**Abstract:**

Bruxism is an important function of the masticatory organs, and the health of the masticatory organs depends on the occlusal function and bruxism is a necessary function for living organisms, and smooth and harmless bruxism is important in health medicine. In fact, the bruxchecker analysis of the occlusal contact of dental patients shows that the canine guidance is only a few percent, and the guidance inclination of the anterior teeth including the canines is too steep for dysfunction. These aspects indicate the need for precise approach to the occlusal guidance to be given in occlusal treatment. Previous studies have shown that controlling tooth contact patterns during grinding, that is, avoiding molar contact, is important to prevent too strong bruxism. It was also reported that the flat canine guidance inclination with respect to the SCI reduces muscle activity during bruxism. In order to prevent too strong bruxism activity, it is important to control the relative canine occlusal guidance (rCOG), that is, to flatten the canine guidance angle with respect to the SCI. Furthermore, a facet on the canine lingual surface (LF) and a flat facet in the cusp tip (CTF) were observed in the canine bruxism facets, suggesting that these depend on the relationship between the SCI and the canine occlusal guidance angle. Based on these past results, this study was conducted to further clarify the relationship between the SCI and the inclination of the canine guidance, and the relationship with Bruxism facet formation.



S. Sato:

*“Benefits of Orthodontics in Treatment of Malocclusion with TMD”*

**Abstract:**

Malocclusion with temporomandibular joint (TMJ) dysfunction is one of the recent increasing cases. Temporomandibular disorders (TMD) are mainly caused by displacement of the lower jaw and dislocation of the articular disk. Headache, stiff neck and back pain, eye and ear symptoms, and digestive and immune system symptoms (autonomic nervous system incongruity) are often accompanied by. Since the deviation of the mandible and the load on the TMJ are considered to be the fundamental problems in the development of TMD, correction of the mandibular position and establishment of occlusal support (unloading joint) are important therapeutic goals. Orthodontic occlusal treatment is an effective tool in this regard. Orthodontic reconstruction of occlusion includes correction of the mandibular position by controlling the occlusal vertical height-occlusal plane, establishment of proper intercuspation and occlusal guidance by controlling the dental arch-tooth axis which are common problems in most of malocclusions. It is an extremely effective method that enables treatment only with prosthetic methods, such as establish occlusal support by uprighting mesial or bucco-lingual inclined teeth, which is also a common problem. In addition, the process of making a diagnosis and a treatment plan is extremely important for the accurate progress of treatment.



## H. Costa: “Can aligners be used for the treatment of the cranio-mandibular system?”

### Abstract:

The use of plastic aligner systems to correct dental position has increased significantly in recent years. However, their usefulness as a true orthodontic tool is far from unanimous, with many orthodontists advocating that aligners are just that: tools for the alignment of teeth (no regard to occlusion). Are they right? Or can aligners be used as an orthodontic tool for the functional treatment of the craniomandibular system, including the control of occlusal plane inclination, vertical dimension, and mandibular position?

In this clinical oriented lecture, through the critical analysis of treated cases, we will try to answer these questions, and address the advantages and disadvantages of aligner systems for the treatment of the cranio-mandibular system. The lecture will focus on:

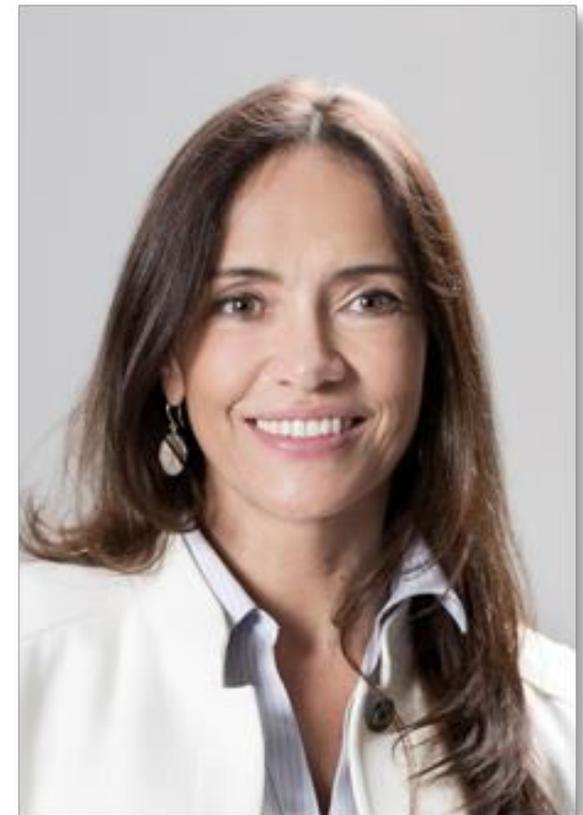
- The practicality of implementing an occlusal medicine treatment philosophy (VieSID Concept) with an aligner technic.
- The possibility of incorporating cephalometric, articulator and axiography diagnostic data into the treatment strategy of an aligner technic.
- We will also share some of our failures, for it is through these that we most learn and evolve.



A. Londoño: *“Overlays as an aid to the orthodontic treatment”*

**Abstract:**

Mandibular repositioning is the main goal of orthodontic treatment, especially for patients with severe skeletal malocclusions. Here is when we need to mix orthodontics and prosthodontics by the use of temporary overlays to help us out with this reposition, holding the mandible in the new therapeutic position while the movement of the dentition is done. These overlays have to be placed on different teeth depending on what skeletal class is going to be treated. The aim of this presentation is to provide clear and useful information about the how and when should we use them both in adults and children



M. Casadei: “*Long term case studies*”

**Abstract:**

The purpose of this presentation is to focus on what happens in long-term follow-ups. Analyze whether functional stability is maintained, what has changed in occlusion or cephalometric values and why. This analysis can help us to correct and try more and more to improve the treatment plan of our orthodontic cases.



H. Alves: *“New trends in human functional occlusion, muscles and posture”*

**Abstract:**

In the processes of human evolution, changes to bipedal posture influence not only head and neck structure, but also mandibular position. This leads to difficulty in maintaining physiological position of the all craniovertebral and craniomandibular systems. In modern, pressure-paced society, functional disturbances of this system (craniovertebral – craniomandibular) are increasing. Therefore, the aim may be referred to functional harmony with the whole system, in a multidisciplinary diagnosis and treatment. Speaking about occlusion, muscles and posture is always very difficult, especially when the discussion is held by specialists with different backgrounds, who base their intervention and procedures on their specific expertise and knowledge. As a matter of fact, the complex topic requires a multidisciplinary approach that describes the viewpoint of orthodontists, osteopaths, sport therapists.



M. Assis: *“New cephalometric measurement for posterior vertical dimension”*

**Abstract:**

Posterior Vertical Dimension (PVD) is directly related to the development of the viscerocranium. A poor PVD usually restricts mandibular anterior adaptation, keeping the skeletal class II from becoming class I during normal growth. Ricketts developed a reliable angular cephalometric measurement for the anterior vertical dimension, known as Lower Facial Height (LFH), however there is no angular measurement for the PVD. An angular measurement has the advantage over a linear measurement, since it doesn't change with the size of the head of different individuals.

This study is the attempt to find a reliable angular cephalometric measurement for the PVD.



N. Oppermann: *“The role of the lower facial height ceph factor in Ortho-/ Protho-planning and treatment”*

**Abstract:**

The Lower Facial Height cephalometric factor is an important indicator for patients' problem diagnostics and to design treatment therapeutic procedures. The understanding of how it is constructed and why it is stable during growth and adulthood, also the correlation between this factor and other factors, such as interincisors angulation, mandibular plane angle and facial axis angles, make easier to program and simulate the treatment objectives on Articulators.



## I Tester: “Wear- the effects of time from a clinical perspective”

### **Abstract:**

The fourth dimension (time) has a significant impact on the longevity of our dental therapies. A better understanding of the effects of wear on our restorations and orthodontic treatments will inevitably help us improve our treatment planning. This lecture will introduce the topic of wear from a VieSID perspective. Erosion, abrasion, attrition and abfraction will be defined and various topics including leverage and loss of sequential guidance will be discussed.

### Attendees will learn:

1. a review of wear from an VieSID perspective
2. definitions of various terms related to wear
3. an outline and format of the lecture day dedicated to wear



## O. Kullmer: “Dynamics and function of the occlusal fingerprint”

### Abstract:

In the presentation we will discuss important aspects of dental wear and adaptive evolutionary processes in the human masticatory system. The occurrence of tooth-to-tooth contacts (occlusion) and the appearance of various tooth types in the dentition for processing various food materials and enhancing mechanical capability reflects a crucial moment in general mammalian evolution. Dental macrowear patterns and occlusal tooth contacts reflect the precision of the bite, and mirror physical properties of foods and dental behavior. The Occlusal Fingerprint pattern in hominin molars shows a distinguished variation in antagonistic crown contacts compared to other primates. This is in consistence with a high versatility in food choice, and corresponds with biocultural behavior and developments in human evolution. Innovative digital techniques and methods (Occlusal Fingerprint Analysis) enable us to apply virtual kinematics and stress analyses for the reconstruction of phylogenetic-structural biomechanical adaptations in the dentition. Surprisingly, it shows that not only the primary dental architecture, but also dental wear can be interpreted as an evolutionary adaptation. Selection-pressure in the masticatory apparatus in humans became severely reduced with increasing cultural evolution influencing the choice, preparation and quality of foods. There is little doubt that a permanent enhancement of energy load in the daily diet was one of the major factors for the successful evolutionary pathway towards modern *Homo sapiens*. Unfortunately, in modern humans particularly in our industrial societies, cases of occlusal dysfunction and temporomandibular joint disorders increase. It seems, that a „lost bite “is the direct consequence of a reduced usage of our mastication system in opposite to its original biological function.

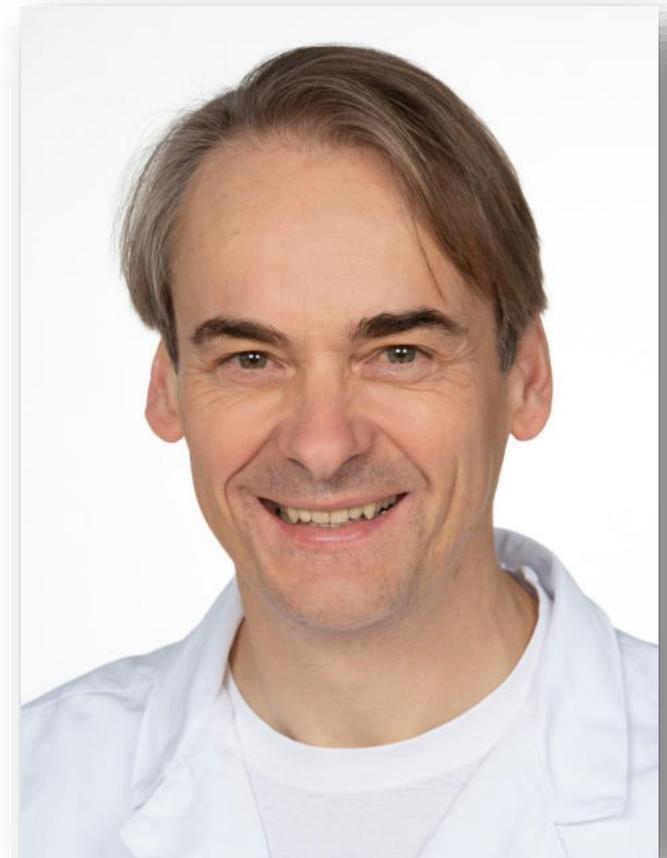


J. Türp: *“What are the clinically and radiologically identifiable features of bruxism?”*

**Abstract:**

Due to the unreliability of anamnestic data on the question of whether someone clenches his jaws or grinds his teeth and due to the unrealistic nature of the requirement for polysomnographic data (sleep laboratory), the patient-related clinical and radiological findings are of decisive importance in answering this question.

After a brief introduction to the topic – including a critical commentary on the new definition of the old term "bruxism" (Lobbezoo et al., J Oral Rehabil 2013) – information on prevalence and risk factors will be provided. The main part of the presentation is devoted to diagnostic signs suggestive of the presence of bruxism. A clinical evaluation of this phenomenon, including its role in stress management (Slavicek & Sato, Wien Med Wochenschr 2004), and a discussion of therapeutic options will conclude the lecture.



## T. Sulaiman: “Dental materials and wear”

### **Abstract:**

The wealth of materials available such as: dental ceramics, adhesives, composite resins, cements, along with direct and indirect restorative techniques for the posterior dentition, with the introduction of new materials by manufacturers at a very fast pace, can be overwhelming for the clinician. When clinicians understand the basic properties and wear characteristics of each material in addition to their proper application, the optimum potential of each material can be achieved providing the patient with exceptional care. This presentation will focus on criteria for material selection and clinical tips to complete the pursuit of excellence in mastering restorative dentistry in load-bearing areas.

### Learning Objectives:

1. Understanding of the evolution of direct and indirect restorative materials.
2. Understanding the properties of direct and indirect restorative materials with emphasis on wear characteristics.
3. Establishing criteria for modern-day direct and indirect restorative material selection with update on their clinical performance.



B. Sagl: “*Effect of facet inclination and location on TMJ loading during bruxism: An in-silico study*”

**Abstract:**

Functional impairment of the masticatory region can have significant consequences that range from a loss of quality of life to severe health issues. Increased temporomandibular joint loading is often connected with temporomandibular disorders, but the effect of morphological factors on joint loading is a heavily discussed topic. Due to the small size and complex structure of the masticatory region *in vivo* investigations of these connections are difficult to perform. In this study we proposed a novel *in silico* approach for the investigation of the effect of wear facet inclination and position on TMJ stress. We use a computer modeling approach to simulate lateral bruxing on the canine and first molar using 6 different inclinations, resulting in a total of 12 simulated cases. By using a computational model, we control a single variable without interfering with the system. Muscle activation pattern, maximum bruxing force as well as TMJ disc stress are reported for all simulations. Muscle activation patterns and bruxing forces agree well with previously reported EMG findings and *in vivo* force measurements. The simulation results show that an increase in inclination leads to a decrease in TMJ loading. Wear facet position seems to play a smaller role with regard to bruxing force but might be more relevant for TMJ loading. Together these results suggest a possible effect of tooth morphology on TMJ loading during bruxism.



## K. Tajima: “Case study – Wear”

### **Abstract:**

Examination and diagnosis of temporomandibular function are indispensable to planning the goal of the treatment. During these diagnoses, we should find out the variation of individual bone structure, jaw function, and occlusal pattern. The Main therapy for the CMD is to remove the over load from the TMJ and ease pain.

Mandibular retraction and skeletally low angle patient are often associated with CMD, and this type of malocclusion appears most frequently among that takes up the Wear the teeth. How to set up the ideal verticalization and changing the occlusal plane during therapy is the most important issue. In this presentation, I would like to show you the multidisciplinary approach for the skeletally low angle patient with CMD-Wear and describe how we planned treatment and eased the pain.



K. Parlett: *“Distraction therapy: concept and practice”*

**Abstract:**

Distraction is a concept frequently referred to in treatment planning and therapy but little attention is given to the details necessary for successful outcomes utilizing distraction as a therapeutic goal.

Various factors such as the type of TMJ pathology, the location of the pathology lower or upper joint space, the type of disc displacement or condylar head change must be defined. The skeletal type and occlusal plane and muscle vectors will also affect the amount of distraction the patient can accomplish. High vertical dimension and lip incontinence will also affect outcomes.

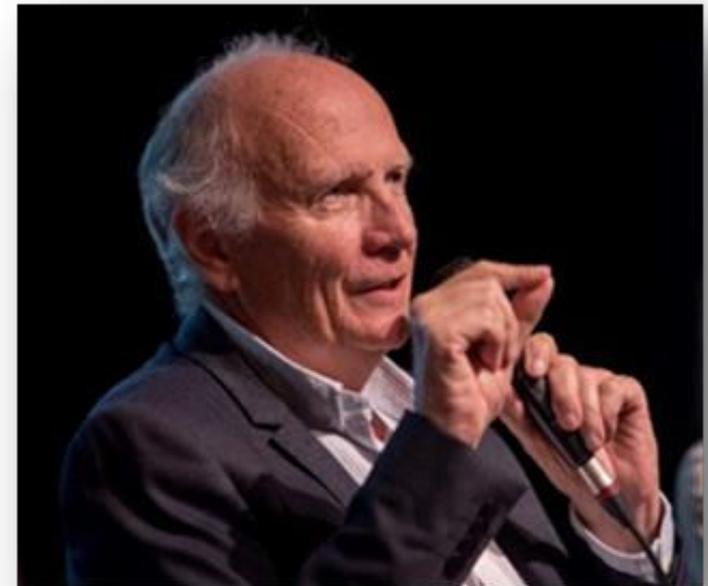
This lecture will provide a definition, review the literature for support of distraction as a therapy. It will cover, guidelines for diagnosis and limitations for initiation of this type of therapy, indications and contraindications. Appliance design, fabrication and adjustments will be discussed with simple tips to help the participants to greater success.



J.D. Orthlieb: *“Curve of Spee in occlusal reconstructions: What is new 35 years after?”*

**Abstract:**

If we look in publications, in lectures, in social networks, we observe generally, even today, treatments with arbitrary choices of occlusion plane using (more or less) non validated reference and archaic principles. Treatments are also routinely observed most often with the absence of occlusal curves. So 35 years after our publication with Rudolf Slavicek, there is nothing new! Spee’s curve does not interest postho or ortho colleagues. From 1985, there has been very few papers on this topic, but in my knowledge, none of the published work has contradicted our findings. The concept of the tangent law (and its variants) is validated by studies in comparative anatomy, geometric analyzes, and cephalometric analyzes in humans. In 1985, we proposed a formula correlating the distance from the occlusion plane to the condyle (DPO) and the radius of the curve of Spee. In 2021, A new statistical study (submitted) reinforces this principle and established a new correlation (stronger than before) with the radius of the curve of Spee and the morphology of the mandible (height of the ramus, length of the corpus, goniac angle). These last variables have a clear advantage: they are completely independent from the teeth. Therefore, we have a new formula to individually calculate the radius of the curve of Spee. Finally, there is something new!



## A. Szygenda: “Importance of condylography in the process of interdisciplinary dentistry”

### Abstract:

I want to present a fascinating topic which is the practical use of condylography. In my private practice I use it every day for planning conscious and responsible treatment of my patients. Condylography gives me information for:

- Anatomy of TMJ (guidelines for articulator settings)
- Physiology and pathophysiology of TMJ (ligamentum condition, muscles conditions, range of movement, mechanic)
- Function analysis (mastication, swallowing, bruxism, speech)
- Occlusion problems and influence on joint condition (compression, distraction)
- Diagnosis of joints pathology (disc dislocation, ankylosis, arthrosis, limitation of movements)
- TRP therapeutic position (disc problems, malocclusion, arthrosis)
- Treatment plan individual functional geometry of occlusion (guidelines for wax-up)
- Instrumental analysis for finding occlusal disturbances on casts
- True Hinge Axis (correct cast mounting and Rp position registration)
- First objective control of our therapy (condylography on splint, provisional crowns)

I will present the above topics on practical examples.



D Garg: *“The steepness of the articulator eminence and the occurrence”*

**Abstract:**

The study was conducted to evaluate if there is any correlation between the steepness of the articular eminence and the occurrence of anterior disc displacement of the temporomandibular joint (TMJ).

**AIM:** The Aim of this study was to evaluate if there is any positive or negative correlation between the steepness of the articular eminence and the occurrence of anterior disc displacement in temporomandibular joint (TMJ) based truly upon the Condylographic interpretations.

**STUDY DESIGN:** Descriptive observational study with retrospective and prospective model. Condylographic records (CADIAX 4 Gamma Dental Klosterneuburg, Austria) of 38 patients with reducible joint luxation were compared to 20 control group healthy individuals at the University Dental Clinic, Vienna. **RESULTS:** Analysis of variance and FLEISS test confirmed highly statistical significance ( $P < .05$ ) at 1 to 8 mm of excursive versus incursive movements compared to healthy patients.

**CONCLUSION:** This study demonstrated that there is a strong significance of mandibular kinematics in the TMDs. The steepness of articular eminence is only one of the contributing factors. Rather it is the difference between the excursive and incursive movements which is of much more importance and is closely related to the synchronized smooth mandibular movements. The excursive and incursive tracings were coinciding in healthy individuals. Whereas in patients with reducible joint luxation there is a separation as well as clicking phenomenon between the excursive and incursive tracings. Therefore, in our diagnostic procedures we should emphasize on the significance of the dynamic Condylographic data and combine them with the static findings in early diagnosis and treatment planning.



M. Rocabado: “*Physiology and Pathology of the TMJ*”

**Abstract:**

There is a neurological link between the upper cervical nerves and the sensory fibres of the trigeminal nerve which receives nociceptive information from the face and other pain sensitive structures in the head. As the upper three cervical nerves enter the dorsal columns, via the dorsal root ganglion, their fibres synapse with the descending fibres of the spinal trigeminal nucleus which descends within the spinal cord caudally to the level of C3. Cervicogenic headache is pain referred to the head from a source in the cervical spine. Unlike other types of headaches, cervicogenic headaches has attracted interest from disciplines other than neurology, in particular orthopaedic manual therapists (OMT) dentist in the area of craniofacial and oral pain, and interventional pain specialist (anaesthesiologist). Under instability conditions, subjects showed a better balance when mandibule was in the most relaxed mandibular position.



## M. Rocabado: “Physiology and Pathology of the TMJ”

These findings raise two important points, a relaxed jaw position improves balance in subjects under unstable conditions and people with better occlusion show a better balance than people with “malocclusions, like crossbites, midline deviations, open bites, increased overjet and class ii.

1. Significantly influencing postural control under experimental conditions were: crowding, midline deviation, crossbite, anterior open bite and more than 3 mm overjet.
2. When comparing the angle class iii, the subjects with angle class ii showed the worse balance.

### OBJECTIVES:

- Importance of Coronal Transverse Occlusal Plane and Craniovertebral Centric Relation. (Congruent).
- High Resolution Tomography the Rocabado Dynamic Atlas-Axis Protocol for synovial Temporomandibular Joint and Occlusal Prevention.
- 2 Basic Maneuver to Determine Cranio Vertebral Atlas Axis Altered Function for Differential Diagnosis.

