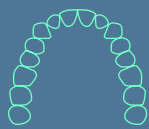


Straight Wire Technique: the Mc-Laughlin - Bennett treatment philosophy

1-year International Program in
Orthodontics



Dr. Daniele Cantarella
DDS, MS, PhD

1-year International Program in Orthodontics, intended for orthodontists committed to an advanced approach to patient care using diagnostics, treatment and case management.

Course in 4 modules with theory and hands-on sessions

- 3 Modules (2 days each) in Skopje, Macedonia
- 1 Module (2 days) in Treviso, Italy

Language

- Course in English with translation in Macedonian

Abstract of the course

The aim of the course is to provide the elements to formulate the diagnosis and planning of orthodontic treatment according to the philosophy of doctors Richard McLaughlin and John Bennett. The McLaughlin-Bennett MB 5.0 system represents the most advanced version of the MBT orthodontic system, conceived by doctors McLaughlin, Bennett and Trevisi in the 1990s, which today has become one of the most codified and widespread treatment philosophies.

The goal is to teach a method of diagnosis, treatment planning and orthodontic therapy that is standardized and easily reproduceable in the daily clinical practice.

The course has an extremely practical approach; several hours will be dedicated to the practical part (hands-on with typodont) so that the participant can immediately apply the notions learned during the course in the daily clinical practice. For this purpose, the modules to be used for diagnosis, clinical examination and treatment planning will be given to the course participants.

Furthermore, the students will have the Demo version of the cephalometric software installed on their laptop PC free of charge throughout the course duration, in order to carry out the cephalometric analysis and treatment planning.

“I only want
the very best.”

Cèsar Ritz 1850-1918

Speaker

Dr. Daniele Cantarella, DDS, MS, PhD

Dr. Daniele Cantarella graduated in Dentistry at the University of Padova with the grade of 110 cum laude, he specialized in Cranio-Mandibular Disorders and Posture at the same University. He specialized in Orthodontics at the University of Ferrara with a thesis on friction and torque control in fixed orthodontic appliances. He obtained the Advanced Clinical Training in Orthodontics and the Master of Science in Oral Biology at the University of California of Los Angeles (UCLA) at the conclusion of a research project on the skeletal effects induced by maxillary expander supported by palatal miniscrews.

He then completed the Doctorate (PhD) in Clinical Research at the University of Milan where he is currently adjunct professor. During his PhD, Dr. Daniele Cantarella developed a minimally invasive surgical technique for maxillary expansion in adults associated with the MARPE device.

He followed the Two-year Postgraduate Program in Orthodontics at the Orthodontic Center of Dr. Richard McLaughlin in San Diego (CA). Member of SIDO, AIDoR, member of the World Federation of Orthodontists (WFO). Member of the Edward H. Angle Society, Component of Southern California.

Author of numerous publications in international orthodontic journals.



MODULE 1

Orthodontic diagnosis and treatment planning.

The patient first visit:

- Medical history, dental and orthodontic history, physical examination
- Analysis of the temporomandibular joint (TMJ) and respiratory function; diagnosis and treatment of sleep apnea syndrome (OSAS)
- Facial and intra-oral photographs; the aesthetic analysis of the face according to Arnett
- The models of the dental arches: the size of the teeth, the symmetry of the arch, the compensation curves (Spee and Wilson), the space analysis and the Bolton index; the clinical protocol according to S. Chu for the determination of the correct size of teeth

The radiological examination:

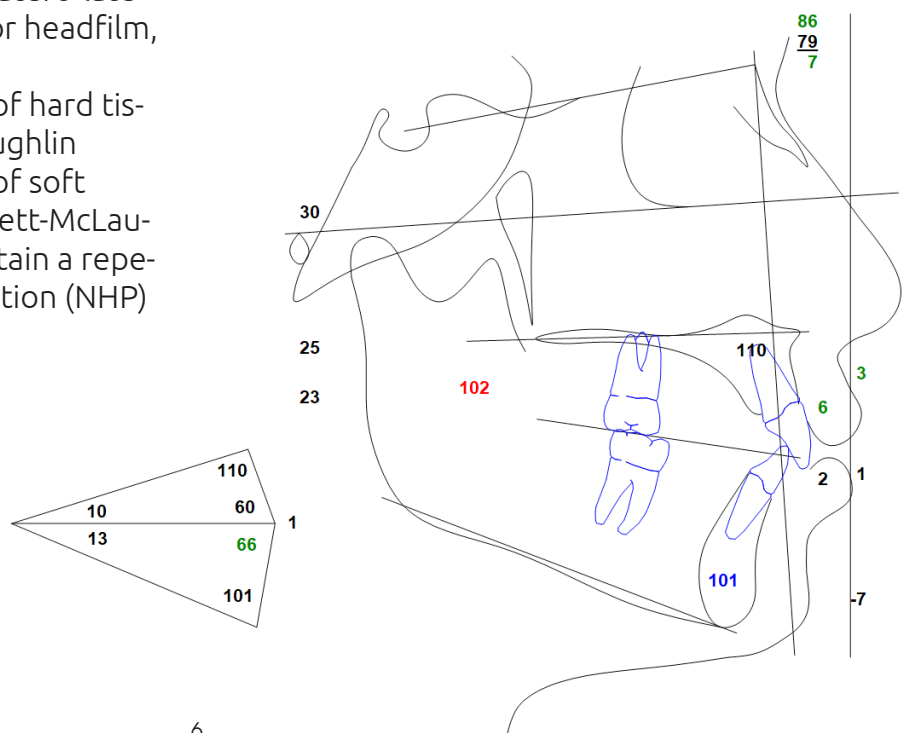
- Orthopantomography, latero-lateral and posterior-anterior headfilm, 3D CBCT radiology
- Cephalometric analysis of hard tissues according to McLaughlin
- Cephalometric analysis of soft tissues according to Arnett-McLaughlin; the method to obtain a repeatable natural head position (NHP)

Orthodontic treatment planning:

- The problem list and treatment goals
- The dental Visual Treatment Objective (VTO) according to McLaughlin: the planning of the position of the incisors, canines, molars, and anchorage requests

The normal occlusion:

- The Andrews 6 occlusal keys
- Tooth-to-tooth or fossa-cusp occlusion according to P.K. Thomas
- Two-tooth or cusp-embrasure occlusion according to Stuart
- The principles for a correct dynamic occlusion (the protrusive and lateral guides)



MODULE 2

The Straight Wire MB 5.0 orthodontic appliance; Class I malocclusion and intra-arch treatment mechanics.

The evolution of the Straight-Wire technique from its origins until today:

- Historical review: the thought of Andrews, Roth, McLaughlin and Bennett
- The MBT pre-adjusted appliance: the prescription, the versatility, the concept of low continuous forces, the closure of spaces with sliding mechanics (without closing loops)
- The MB 5.0 pre-adjusted appliance, latest evolution of the MBT system

Bracket placement in orthodontics and the bracket positioning chart according to McLaughlin and Bennett:

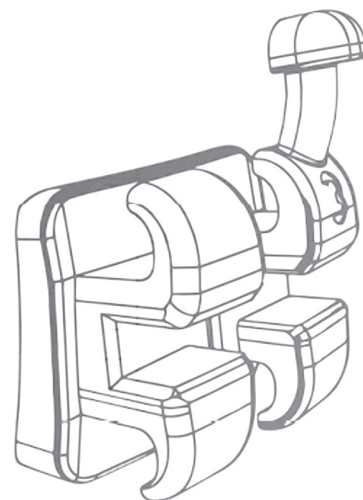
- Direct bonding (clinical sequence)
- Indirect bonding (laboratory and clinical sequence)
- The new indirect bonding systems with digital technology and 3D printer

Class I malocclusion:

- Dento-alveolar discrepancy: crowding and diastemas
- The dental bimaxillary protrusion
- Inter-proximal reduction (IPR) or stripping as a useful method to gain space in the arch: IPR with diamond strips, burs (air rotor stripping or ARS), oscillating instruments; long-term dental and periodontal health
- The agenesis of the lateral incisors: when to open and when to close the spaces

Intra-arch treatment mechanics:

- Leveling and aligning, overbite correction (OVB), space closure
- Laceback, bendback, passive and active tieback
- Sequence of archwires in extraction and non-extraction cases
- The individualized arch form, in compliance with the basal bone shape and the functional matrix
- The anchorage request in extraction cases
- Bracket placement in cases of canine substitution (lateral agenesis): versatility of the MB 5.0 appliance



MODULE 2

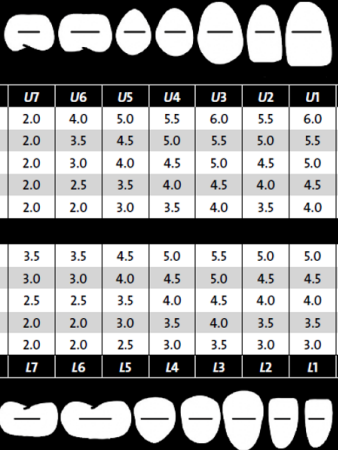
Hands-on session

Friday morning:

- Execution of cephalometric analysis of hard and soft tissues on lateral headfilm brought by the course participants: a tracing will be performed on a computer; a free demo of the cephalometric software valid for 9 months will be installed on PC laptop
- Execution of dental VTO on a clinical case brought by the course participants

Saturday morning:

- Indirect bonding: bracket positioning according to McLaughlin-Bennett and according to Kalange's marginal ridge method, review of the theoretical part
- Indirect bonding with digital technology and bonding trays made with a 3D printer
- Execution of silicone bonding trays on plaster models brought by the course participants, for the transfer of the brackets on patient
- The trainees will place brackets on plaster models of patients who will start treatment



	U7	U6	U5	U4	U3	U2	U1	Arcata Sup.
A	2.0	4.0	5.0	5.5	6.0	5.5	6.0	+1.0 mm
B	2.0	3.5	4.5	5.0	5.5	5.0	5.5	+0.5 mm
C	2.0	3.0	4.0	4.5	5.0	4.5	5.0	Standard
D	2.0	2.5	3.5	4.0	4.5	4.0	4.5	-0.5 mm
E	2.0	2.0	3.0	3.5	4.0	3.5	4.0	-1.0 mm

	L7	L6	L5	L4	L3	L2	L1	Arcata Inf.
A	3.5	3.5	4.5	5.0	5.5	5.0	5.0	+1.0 mm
B	3.0	3.0	4.0	4.5	5.0	4.5	4.5	+0.5 mm
C	2.5	2.5	3.5	4.0	4.5	4.0	4.0	Standard
D	2.0	2.0	3.0	3.5	4.0	3.5	3.5	-0.5 mm
E	2.0	2.0	2.5	3.0	3.5	3.0	3.0	-1.0 mm



MODULE 3

The Class II malocclusion, inter-arch treatment mechanics Part I; therapy of impacted canines.

The diagnosis of Class II malocclusion:

- Skeletal and dental malocclusion; cephalometric analysis and face analysis
- The McLaughlin-Arnett analysis for the treatment planning (mandibular advancement therapy or distalization of the upper arch)
- The vertical control in the treatment of Class II malocclusions
- Analysis of slide from centric relationship (CR) to centric occlusion (OC)
- The diagnosis of respiratory problems associated with Class II malocclusions
- Analysis of the patient's skeletal maturation using the cervical vertebrae staging method (CVM)

Treatment of the growing patient:

- The Twin Block appliance: skeletal and dental components of growth modification
- Fixed functional appliances

Distalization of the upper dental arch:

- The open coils and class II elastics, the sliding Jig
- Sectionals and class II elastics
- Non-compliance therapy with the Pendulum appliance
- Distalization of the upper dental arch using miniscrews as anchorage

Extraction treatment in Class II malocclusions:

- The selection of teeth to be extracted on the basis of the anchorage emerged from the dental VTO
- Biomechanics in the McLaughlin-Bennett MB 5.0 appliance

Treatment of Class II malocclusions in the adult patients:

- Distalization of the upper dental arch using miniscrews as anchorage
- Orthodontic camouflage in Class II malocclusions: guidelines and mechanics
- Orthognathic surgery according to Arnett in Class II malocclusions

The impacted canines:

- Etiology and diagnosis
- Early therapy of ectopic canines in the mixed dentition
- The orthodontic-surgical treatment of the impacted canine in the permanent dentition: the palatal and buccal approach
- The versatility of the MB 5.0 appliance in the therapy of the impacted canines



MODULE 4

The Class III malocclusion, inter-arch treatment mechanics part II; the vertical and transversal problems.

The vertical problems:

- Open bite and deep bite: diagnosis and orthodontic treatment mechanics
- Myofunctional therapy for the treatment of open bites

The transverse problems:

- Diagnosis of skeletal or dentoalveolar contraction of the maxilla: postero-anterior cephalometric analysis, Wilson curve analysis, analysis of the dental arches according to the University of California of Los Angeles (UCLA)
- The expansion of the maxilla in mixed dentition, in permanent dentition, and in the adult patient
- Maxillary expansion and its relationship with nasal breathing and obstructive sleep apnea syndrome (OSAS)
- Skeletal expansion versus dentoalveolar expansion

Class III malocclusion:

- The vertical, horizontal and transversal components in the Class III malocclusions
- The differential diagnosis between true Class III and pseudo-Class III malocclusion (CR-CO discrepancy)
- Orthopedic maxillary advancement with face mask in the growing patient: skeletal and dentoalveolar components
- Extraction and non-extraction treatment of Class III malocclusion in the permanent dentition
- Camouflage treatment in the Class III malocclusions
- Orthognathic surgery in the Class III malocclusion

Treatment of asymmetries:

- Differential diagnosis: skeletal asymmetry, dento-alveolar asymmetry, CR-CO lateral sliding
- Therapy of skeletal asymmetries using functional appliances in the growing patient
- Treatment of dento-alveolar asymmetries by means of asymmetric treatment mechanics using TADs
- Asymmetric extractions and asymmetric anchorage

Temporomandibular joint disease (TMJ):

- The anatomy and pathophysiology of the temporomandibular joint (TMJ)
- The causes of TMJ pathology
- Historical perspective of the relationship between occlusion and cranio-mandibular disorders
- The diagnostic and stabilizing occlusal splint
- TMJ physical therapy, the role of the physiotherapist
- Pharmacological therapy of the TMJ in the phases of acute inflammatory processes

The finalization of the orthodontic case:

- The American Board of Orthodontics (ABO) standards

The orthodontic retention:

- The wraparound retainer
- The Cad-Cam fixed retainer
- The vacuum-formed retainers

MODULE 4

Hands-on session

Friday afternoon

The MB 5.0 intra-arch treatment mechanics

- Positioning of lacebacks, passive and active tiebacks, bendbacks on typodonts

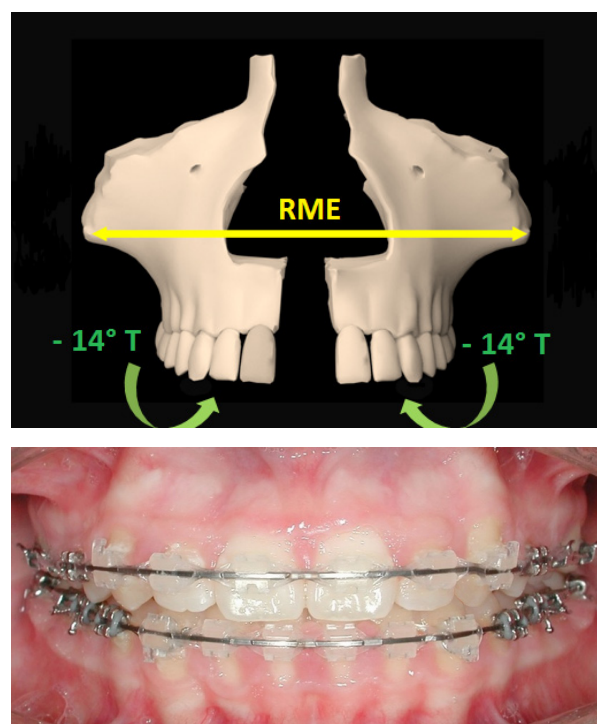
Saturday (all day)

Wire bending

- First, second and third order finishing bends on stainless steel archwires
- Creation of sectionals to be used in cases of tooth extraction to close spaces, and sectionals to be used for the distalization of the upper arch
- The bite-opening curves on stainless steel archwires

Analysis and discussion of clinical cases brought by the participants

- Course participants are encouraged to bring clinical cases at each module, with facial and intra-oral photographs, orthopantomography, latero-lateral headfilm, cephalometric analysis of hard and soft tissues, dental VTO
- A cephalometric software will be installed on participants' PC laptop throughout the course duration for advanced diagnosis and treatment planning



→ **INSTRUMENTS REQUIRED FOR THE COURSE (HANDS-ON SESSION)**

- Personal Computer (laptop) for the execution of cephalometric tracings; the cephalometric software demo will be installed free of charge throughout the duration of the course
- Dental caliper (to measure the size of the teeth, and to mark the position of the black and red reference lines on the plaster model for indirect bonding hands-on session)
- Bracket positioning pliers
- Bracket gauge
- Scaler – utility instrument
- Mathieu plier
- Tweed pliers (2 pliers)
- Bird-beak plier
- Weingart plier
- Turret plier
- Ligature cutter
- Archwire cutter

The participants will be provided with the modules (pdf) to be used in office for the anamnesis and orthodontic visit, for the analysis of the TMJ and respiratory functions, for the cephalometric analysis, the dental VTO and the planning of the orthodontic treatment. Several articles on the literature relating to the covered topics will also be provided.

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DATES

- Module I: September 02-03 2023 in Skopje (Macedonia)
- Module II: November 04-05 2023 in Skopje (Macedonia)
- Module III: December 02-03 2023 in Skopje (Macedonia)
- Module IV: January 27-28 2024 in Treviso (Italy)

LANGUAGE

- Course in English with translation in Macedonian

PRICE

- 2.800 Euro (included taxes)
- 2.500 (included taxes) for payments received before July 1st 2023

→ **For information and registration** please contact Dr. Aleksandra Podolesova at OrthoExpert, Skopje:

- ortho.expert.mk@gmail.com
- +389 75322966 or +389 25112012