

## An interview with

# Anibal M. Silveira Jr.

- Graduated in Dentistry - Universidade Federal do Rio Grande do Norte (UFRN), 1972-77.
- Fellow - Pediatric Dentistry - Project HOPE – Natal, Brazil, 1977-78.
- Specialist in Pediatric Dentistry - Eastman Dental Center, University of Rochester; Rochester, New York, 1978-80.
- Specialist in Orthodontics - Eastman Dental Center, University of Rochester; Rochester, New York, 1981-83.
- Fellow in the Temporomandibular Joint Program, Eastman Dental Center, University of Rochester; Rochester, New York, 1983-85.
- Clinical Instructor - Orthodontic Department, Eastman Dental Center, NY, 1983-88.
- Chairman and Assistant Professor - Orthodontic Department, University of Colorado, Denver, 1988-91.
- Research Director and Associate Professor - University of Louisville Dental School (ULSD), KY. Orthodontic Program Director, ULSD Department of Orthodontic, Pediatric and Geriatric Dentistry - 1993-2007.
- Professor and Chairman - Department of Orthodontic, Pediatric and Geriatric Dentistry, University of Louisville School of Dentistry (ULSD).
- 45 Peer review publications (Scientific Articles and Abstracts).
- 5 Textbook Chapters on Orthodontic Topics. Recipient of 16 Grants from Federal, State and Other Educational Institutions or Dental Organizations as Principle Investigator or Co-Investigator.
- Supervised, as primary mentor, training of over 50 postdoctoral Master of Science Degrees in Oral Biology and Orthodontics.
- Recipient of “The Chancellor’s Award for Teaching Excellence”, the highest teaching award given by the University of Colorado Health Sciences Center - 1991.
- Recipient of the “University of Louisville Distinguished Teaching Professor Award”, the highest teaching award given by the University of Louisville - 1996.
- Nominated as the Vice President, NU Chapter Omicron Kappa Upsilon in 2004, and elected President, NU Chapter Omicron Kappa Upsilon in 2005.



Anibal Silveira has been an inspiration for an entire generation of American and Brazilian orthodontists. He is a genuine Brazilian who has won a position of professional respect as an orthodontic educator in the United States. It would be redundant to mention his many achievements in education in orthodontics, however, with all his experience and knowledge, humbleness in the face of these achievements, is his main personal trait. He is an excellent leader and motivator for his students, as well as a tireless researcher in the areas of growth and development, temporary anchorage devices, computed tomography, cone beam 3D and new teaching techniques in orthodontics. Dr. Silveira is the perfect example of how work dignifies a man.

Dr. Silveira has been married for 35 years to Cheryl Markle Silveira and has two sons; Bryan M. Silveira (27 years old) and Derek M. Silveira (23 years old). Dr. Silveira travels to Brazil as often as he can to visit his parents Anibal Mota da Silveira and Maria Teresinha Couto da Silveira, and his two brothers and three sisters who still living in Natal, Brazil.

Readers, in the following pages, will have the opportunity to know a little more about one of the giants of orthodontics in North America, and why not to say, of the world.

José A. Bósio

**Our college times are unforgettable. Can you tell us where did you attend dental school and what remembrances do you have from that time?** José Bósio

I was very fortunate to attend the Federal University of Rio Grande do Norte (UFRN), School of Dentistry. The School has a long tradition of graduating competent dentists to serve both Rio Grande do Norte and our country's northeast region. I have great memories of outstanding faculty, staff and students. Over the years I have and felt a deep sense of gratitude for all the teachers that have given me a solid foundation that has been with me all of these years.

**Everyone knows that moving from one country to another is difficult, but it is usually accompanied by professional growth opportunities. Why did you decide to study in the United States and decided to stay in the university setting of that country?** José Bósio

This is a great question that probably requires a long answer; however, I will try to make my response short and direct. One of the

greatest impacts on my life occurred during my second year as a dental student. In the summer of 1973, through life's destiny, I met a beautiful young American girl from California who became my wife and by far the most influential person in my life. At that time, the Washington D.C. based Project HOPE (Health Opportunities for People Everywhere—Hospital Ship) was in Natal and working with the UFRN. My wife was an administrator with that organization assisting the healthcare professionals that came from the USA and all over the world. My wife and many of the doctors that I met at Project HOPE, encouraged me to apply for a residency in Pediatric Dentistry in the United States. One morning, in December of 1977, I received a phone call from my wife telling me that I had been accepted into a Pediatric Program at the prestigious Eastman Dental Center at the University of Rochester in Rochester, New York. Needless to say, I was stunned and could not believe what had happened and what this would mean for me... Well, the rest is history... I went on to become a certified Pediatric Dentist and then, later, a certified and Board Diplomate in

orthodontics. After completing my specialty training, more opportunities arose for me to teach here in the United States than in Brazil, so I decided to begin my teaching career here with my young family.

**As you reflect on your career, what three individuals most influenced the choices you made to be where you are today, and why?**

Jason Cope

First and foremost, I am grateful to my parents for never wavering when it came to fulfilling their dream for their six children to get a university education. As I look back over these 32 years I have many to thank and I owe an enormous debt of gratitude to all who have contributed to my professional education and to my life. As for the three... may I include four... to do justice to all of them. During my Pediatric training from 1978-80, it was Dr. Steve Adair (Program Director and Clinical mentor) for his in depth knowledge, outstanding clinical skills and for believing in all of his students. I also cannot forget the late Dr. Michael Buonocore (preeminent Research Mentor and Thesis Director) who contributed so very much to my research education and knowledge of dental resins and sealants. During my orthodontic training from 1981-83 and as an academic colleague from 1983-88, the "Great" J. Daniel Subtelny (my chairman, mentor and personal friend for more than 29 years) for excellence in education, expertise in craniofacial anomalies and cleft lip and palate and for being a role model for all of his graduates from the Orthodontic Program at Eastman Dental Center. Lastly, Dr. Leonard Fishman (mentor and friend), for his research intellect and for guiding my original research on the use of hand wrist imaging indicators as skeletal maturation predictors of growth status. I am forever grateful to these kind gentlemen who have given so much to my personal education and to our Orthodontic Specialty.

**To win in "America" requires extreme dedication, perseverance, and determination. Professional recognition normally happens if you perform your tasks correctly. What do you attribute your professional success in the U.S.?** José Bósio

I strongly believe that I have been given many opportunities that perhaps could have been given to an individual that is perceived to have better skills or superior intellect. Therefore, I have always felt that I have an obligation to myself and to those that have helped shape my life to do the best that I can to assimilate the vast knowledge within the field of orthodontics and to pass it on to my students to the best of my abilities.

**The ADA (American Dental Association) has established regulations requiring graduate orthodontic programs in the United States, such as 24 hours supervised patient management within each week and an 8-hour daily work schedule. There are many orthodontic programs in Brazil that apparently do not fulfill these requirements. What is your opinion of this type of orthodontic training?** Russell T. Kittleson

The Commission on Dental Accreditation (CODA), which operates under the auspices of the ADA, is recognized by the U.S. Department of Education as the national accrediting body for dental, advanced dental and allied dental education programs in the United States. CODA standard 4.1 which deals with "Orthodontic Curriculum and Program Duration", clearly defines all advanced specialty education programs in orthodontic and dentofacial orthopedics must be a minimum of twenty-four (24) months and 3700 scheduled hours in duration.

I truly believe that all orthodontic programs should follow the CODA guidelines of time duration and a sequential curriculum that exposes all facets of orthodontic training. To achieve a minimum level of proficiency in the

practice of orthodontics one should have a good knowledge base of biological sciences, growth and development, biomechanics, the application of computer technology (including application of CBCT), implants in orthodontics, functional jaw orthopedics, oral-pharyngeal function, temporomandibular disorders, periodontics, early treatment, adult treatment, surgical orthodontics, public health issues and other areas of interest to our specialty. In my view, to teach postgraduate students a level of competency in all these areas of orthodontics, a minimum of 24 months (3700 hrs) is imperative to protect the public's oral health.

**The world is going through an important moment that requires definitions/actions in areas not affected by the economic crisis until now. In your opinion, how can professional associations act to minimize the existent problems here in USA concerning the enormous financial debt that graduate students carry upon graduation due to the high cost of postgraduate education?** Eus-táquio Araújo

Most dental schools already have financial aid officers dedicated to assisting students in receiving the best financial aid packages possible.

The types of financial aid for dental students include:

- Federal and private loans.
- Scholarships and grants that are based on merit, financial need, or other qualifications.
- Research Fellowships and Traineeships.
- Commitment Service Scholarships, including the U.S. Armed Forces and the U.S. Public Health Service loan repayment programs are also available for graduates who opt to practice in designated shortage areas, for individuals pursuing funded research projects, and for those who choose careers in academic dentistry.

In addition, it might be helpful if organizations such as the ADA, AAO, and others could provide more low cost loans and better resources for job placement for recent graduates and the financing of new practices.

Another possible solution, although difficult to implement, would be to have some sort of agreement between the accredited dental institutions that would restructure the large tuition discrepancies that exist currently between Orthodontic Programs in the United States.

**What are the strengths and the weaknesses as you see them in orthodontic graduate programs?** Russell T. Kittleson

Recent technical advances and product developments have dramatically changed the nature of orthodontic graduate programs and we believe this culture of change will only strengthen the future of orthodontic education. Custom fit appliances, modern heat sensitive wires, advances in surgery, temporary anchorage devices (TADs), new diagnostic computer programs and CBCT have allowed Orthodontic Programs to become much more efficient and innovative.

The weaknesses in Orthodontic Programs have been well documented recently. Due to the lack of resources, which have been exacerbated in the current economic downturn, the high cost of residency programs coupled with the small number of residents entering academia is threatening the future sustainability of vibrant educational programs.

**You have had faculty positions at two other universities, how did your past experiences at the Universities of Rochester and Colorado, in combination with your experience at University of Louisville, influence how you chair the Orthodontic Department today?** Jason Cope

As I look back on my previous assignments at the Universities that I have been associated with, there was a great deal of learning, maturing and growing associated with each position.

The University of Rochester/Eastman Dental Center is an institution with an international reputation for its postgraduate training in all specialty areas and for its enormous contribution to caries, periodontal and orthodontic research. At Rochester all the resources are directed towards the specialty programs and research, since they do not have an undergraduate Dental School. Rochester provided me with a solid foundation and a deep curiosity for dental research and critical clinical thinking that has served me well over my 32-year professional career in academics.

At the University of Colorado, however, my experience was quite the opposite, since it only had an undergraduate program in orthodontics at that time and its major emphasis was to offer the best possible all-around dental training for its dental students from the Southwestern region of the United States. The University of Colorado has succeeded over the years in providing a great education to its dental students. In Colorado, I learned how challenging it was to educate undergraduate students and to cultivate their interests in a specialty while training them to be knowledgeable in all disciplines as a general dentist.

At the University of Louisville-School of Dentistry I have come full circle, as it has been the largest University that I have taught. It offers both undergraduate and postgraduate dental education programs, and as Chair of the Department of Orthodontic, Pediatric and Geriatric Dentistry, I have been able to draw on all of my past experiences in Orthodontic and Pediatric Dentistry at both the undergraduate and postgraduate levels, as well as my experiences in research. The University has a wealth of tradition, having been established in 1795, and the Dental School has graduated many excellent general dentists and specialists since it was established in 1819. As a chairman of one of the Dental School's five Departments, my job

is overwhelming at times, humbling on many occasions and full of challenges on most of days. I am fully aware of my responsibilities and I try to do my best every day to fulfill the trust that all faculty members in the Department have bestowed on me.

**We are Brazilians and we know the difficulties that orthodontic education is facing in our country due to the high commercialization, lack of federal regulation or by professional vulgarization. Since we live a different scenario here in the USA, how can we help our country?** Eustáquio Araújo

This is probably one of the most difficult questions for me to answer. Because I have been living here in the US for over 32 years, I am not as familiar with Brazil's professional organizations and their structure as I should be. However, I must say that I have met many of my colleagues from Brazil at the national AAO Annual Meetings here in the US and I am very impressed with their knowledge and professionalism. As we have learned here and in other countries, the continuity, vibrancy and accountability of orthodontics must always rely on a strong and cohesive professional organization that monitors its national activities and lobbies government institutions for improvements that will protect the public and the specialty. I am not aware that our Orthodontic Association would need any assistance in strengthening the orthodontic profession in Brazil, but if such a time arrives, I would hope that we Brazilians in academic institutions in the US would be more than willing and happy to provide any assistance that might be requested.

**Do you believe it will be possible in the near future to forecast growth by use of the 3D CBCT?** Russell T. Kittleston

I have asked my friend and colleague, Professor William Scarfe to collaborate with an answer

to this important and relevant question. Dr. Scarfe is a Board certified oral and maxillofacial radiologist and in a unique position to address this question since he has been involved with CBCT imaging since 2005. He has presented and publishing extensively on CBCT including co-authoring the American Academy of Oral and Maxillofacial Radiology (AAOMR) executive opinion statement on performing and interpreting diagnostic cone beam computed tomography (Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2008;106:561-2). He, together with Professor Allan G. Farman, has mentored many of our graduate students in their Masters Programs. Professor Scarfe is the newly appointed Editor of the Radiology Section of the journal "Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontics". Most recently he has also been appointed as one of four AAOMR representatives to a joint committee of the AAOMR and the American Association of Orthodontists to develop a position paper on the use of imaging for orthodontics with particular reference to CBCT.

**Dr. William Scarfe:** Cone beam computed tomography (CBCT) is no doubt a major advancement in the imaging armamentarium available to the orthodontic profession. Together with personal computer-based analysis software, this technology is now capable of providing accurate 3D visualization capabilities of the maxillofacial skeleton and facilitates an understanding of complex osseous and soft tissue relationships. The foundations of our current understanding of craniofacial growth has, for the most part, resulted from prospective longitudinal growth data and image analysis from independent cohorts such as the Bolton-Brush, Burlington and Iowa groups. These studies have provided trend data that have been used successfully for decades. However, such studies involving CBCT imaging would not be

possible today because repeated indiscriminate exposure of radiosensitive patients to ionizing radiation over many years at higher levels than conventional imaging would not be condoned. Nonetheless, we are not convinced that repeating such studies by substituting 3D for 2D imaging would provide us with the data that we really need. As the goal of applying growth trends is to understand the individual growing pattern of each young patient in order to plan and modify treatment, perhaps CBCT imaging provides us with an opportunity to re-think our approach to growth forecasting. As radiation exposure considerations will most likely restrain CBCT imaging to patients who receive treatment it is perhaps more important to define on whom forecasting is appropriate. There is no doubt that software-based virtual modeling to extrapolate growth tendencies will expand exponentially. But it will have to rely on multi-center collaborations. In addition, the role of the soft tissue and airway on skeletal growth will be further elucidated. 3D CBCT is merely the available tool—it should be applied appropriately to allow us to expand our understanding of growth and the influence of the application of various treatments for specific individuals.

**The orthodontic profession has done a poor job at recruiting faculty. In the long run, this negatively affects the resulting quality of graduating orthodontists, and ultimately patients care. What do you think the biggest obstacle to recruiting high quality orthodontic educators, and how can we overcome it?** Jason Cope

This is so true. We are victims of our profession's great success. The biggest obstacle to recruiting high quality educators has been the financial limitation of most educational institutions to compete with the private sector in offering competitive remuneration for scholastic careers in orthodontics. In the short



term, our Program has been taking a multi-pronged approach to alleviate these problems. Our core full-time faculty is utilizing many qualified part-time orthodontists from the community to fill some of our needs. In addition, the distance learning program promoted by the AAO has allowed us the interaction to share resources with other universities here in the United States and around the globe. In the long term, we are working on ways to foster academic careers within our institutions through a combination of suggesting loan forgiveness for academic service, better research and pedagogical training, offering allocation of time for private faculty practice, increasing fringe benefits and promoting fellowships that would train future educators.

**Do you envision distance learning education as the future for orthodontic educators in the United States and around the world?** José Bósio

We are fortunate and have had the opportunity to experience distance learning education first-hand. Our residents participated in a research project funded by the American Association of Orthodontists Foundation directed by Dr. William Proffit from the University of North Carolina that involved three graduate orthodontic programs (Louisville, North Carolina and Ohio State). The project consisted of orthodontic faculty teaching interactive seminars via videoconference with residents at distant locations. Our residents felt it was worthwhile, and learned a significant amount while participating in these interactive seminars. Although distance learning and interactive videoconferencing will likely never replace face-to-face instruction and interaction entirely, such a use of technology can be a great supplement to graduate orthodontic education, especially for programs with limited numbers of faculty in their department. Presently, these videoconferences have been

extended to orthodontic programs in Canada and Australia. We at Louisville, appreciate the efforts and leadership of Dr. Bill Proffit throughout this project.

**Suddenly, the “new” starts to occupy space in orthodontics. Many times, scientific evidence is left aside and many procedures and techniques are incorporated into the daily clinic without scientific support. What are your thoughts about this situation?** Eustáquio Araújo

As educators, one of our greatest challenges is to deeply impress upon our students the importance of the use of evidence-based methods of treatment that have been proven through scientific research. As described by the ADA, “Evidence-based dentistry (EBD) is an approach to oral health care that requires the judicious integration of systematic assessments of clinically relevant scientific evidence, relating to the patient’s oral and medical condition and history, with the orthodontist’s clinical expertise and the patient’s treatment needs and preferences.”

There is no question that orthodontics has become a vast and growing successful enterprise that has become prone to commercialization and the pressures of the free market that make claims that have not been substantiated by independent and reliable research. There are many in our specialty who claim that orthodontics is more of an art than a science. I believe that it is primarily a science which also requires artistic appreciation and esthetic ideals. In the future we will probably see more orthodontists practicing EBD in orthodontics due to more reliable statistical methods (such as meta analysis, prospective studies, etc.) that will substantiate or disprove claims of “new” innovations.

**Some orthodontic treatments are unforgettable, because of the success or because of the difficulties during its course. What was**

**your most difficult orthodontic case and what have you learned from it?** José Bósio

Aglossia: A rare birth defect where the tongue is missing or underdeveloped and where other anomalies are also often present (e.g., missing parts of hands and feet, small jaw and oral webbing).

The absence of the tongue can have a huge impact on the structure of the jaws as there is no tongue to provide pressure against the teeth which normally helps maintain good oral structure and function. Consequently, without a tongue, the patient often presents with severe collapse of the bite and jaws especially if there are missing teeth—as happened in this case.

This particular case was a very challenging one. In addition to the conditions that have already been mentioned above, there were several other issues. The patient presented with only four teeth on the lower arch; two first molars, one bicuspid and a deciduous molar on the left side of the mandible. For this case we used a surgical technique called Mandibular Symphyseal Distraction Osteogenesis (DO) with an expansion device directly attached to the symphyseal region as an alternative to orthodontic treatment to resolve the mandibular anterior width deficiency.

Compliance by the patient with the distraction was a major issue, however in addition, the maintenance of the expansion was a difficult one since the patient had no muscle function or equilibrium without the tongue. Needless to say, the result was not what we had hoped for.

What I learned from this experience was the lesson that my mentor Dr. J. Daniel Subtely always stressed: “Form follows function and promotes change with time”. In other words, the interaction of muscle, bone and function ultimately determine the shape and outcome of the jaw structure and without one of the factors present you cannot have good long-term retention.

**Aligners have been introduced to the orthodontic community many years ago. In 1999, a new company improved the quality of the aligners and developed easier ways to achieve orthodontic results without having to use metal/porcelain/plastic braces. Recently, the same company started to merchandise its products not only to orthodontists, but also to general dentists and directly to the general public. What is your opinion about the marketing strategies used by the company? And what is your experience and results with these methods of orthodontic treatment?** José Bósio

I must confess that I have never been happy with the marketing approach of the Clear Align Technology (CAT) companies that expose their products to the US public. In the first place, the technique should have had been initially introduced to orthodontists, tested and then exposed to the public at large. Instead, the company’s approach was to introduce the technique through a blaze of television publicity and mass marketing that was designed to create consumer interest before careful research evaluation had identified and solved problems which have become apparent during its use over the ensuing years. The strategies and policies of marketing to general dentists without regard to their abilities and knowledge continue to be a concern for many of us in the field of orthodontics.

At the University of Louisville Orthodontic Program, all residents are trained to prescribe and treat a number of cases with Clear Aligner Therapy. The company has donated a number of cases to our program to provide residents with the opportunity to treat patients using this technology, and of course to provide them with exposure to their product.

Our experience with clear aligners has generally shown that they can be successful at producing certain movements and treating cases that would be relatively simple with



traditional fixed appliances; however, its use in more complex cases is more challenging and the results are more unpredictable. CAT is relatively effective at aligning teeth with mild to moderate crowding (often with a great deal of IPR), closing mild to moderate spacing, intruding individual teeth and tipping teeth. It is less effective for aligning teeth with severe crowding, aligning teeth that are severely displaced labially or lingually, extruding incisors, positioning ectopic canines, closing bicuspid extraction spaces, and translating teeth.

Although a number of case reports have been documented in the literature, at this time, almost no long term data for the outcome of CAT treatment has been published in refereed professional journals. Currently, the University of Florida and UCSF are conducting long term studies into the efficacy of this technique and the results will certainly be published in the future.

**Computer aid orthodontic treatments used to bend pre-adjusted wires is currently being used in orthodontics. Companies and orthodontists are claiming that better and faster results can be achieved using this method. What is your opinion, experience and concerns with this type of procedures?**

José Bósio

A computerized treatment approach and appliance customization system should offer some advantages over conventional orthodontic systems by reducing some margins of error. This technology is based on the premise that fixed appliance therapy is effective, but subject to error due to many factors. Fixed appliances and a straight-wire approaches to orthodontic treatment do not always produce an ideal result because of morphologic variation of teeth, bracket positioning errors, and appliance prescription details. The computer-aided approach and technology have been designed and customized to offer the orthodontic practitioner

the opportunity to minimize these errors by providing the clinician with a 3-D computer model (captured with the OraScanner or CBCT) of their patient. The practitioner uses the 3-D images and computer-based 3-D planning software program to produce a virtual simulation of the teeth in ideal occlusion. Automation technology then takes the virtual occlusion and creates precision bracket placement trays and robotically fabricated precision archwires to be used in treatment.

Like most orthodontic programs in the US, we at the University of Louisville have not yet incorporated this technology into our program. The company has focused its marketing on private practice orthodontists, and we have not used it yet because of the high cost. I do believe, however, that this technology has merit and potential in the future as the cost decreases. The ability to visualize an individual case in 3-D could have great potential benefit in giving clinicians more precision in determining the final positions, tips, angulations and inclinations of teeth within the arch that should lead to a better treatment result.

However impressive the technology appears, it is important to recognize that this technique does not incorporate essential aspects of orthodontic treatment planning such as growth and development, occlusal function and interactions with other structures in the orofacial complex. I frequently remind our residents during seminars that the explosion of technology in recent years has not replaced the need for a clinician to think, diagnose, and control other factors we all encounter in the daily practice of orthodontics.

**At the end of the day, when you leave the office, what do you like to do in your spare time? What, besides orthodontics, makes Anibal Silveira happy?** Jason Cope

In addition to spending time with my family and traveling, I have developed a passion for

the game of golf and I enjoy this along with my interest in many other sports.

**What message can you leave to the young professional initiating their career in the orthodontics specialty?** Jason Cope

Love what you do, and you'll never work a day in your life. Be the most ethical professional that you can possibly be, and you'll never regret it.

Never forget from where you came, and you will never be forgotten. And most important, never forget the people who have helped shape who you are. This may not be much of a message, but it is what I thoroughly believe in and live by.

**NOTE: I would like to express my sincere appreciation to my colleague Dr. José Bósio for facilitating this interview in this prestigious journal.**

### **Eustáquio Araújo**

- MSc and Specialist in Orthodontics, University of Pittsburgh, PA, USA.
- Pete Sotiropoulos Professor of Orthodontics, Assistant Director and Clinic Director; Saint Louis University, St. Louis, Missouri.
- Member of the Angle Society of Orthodontics, Midwest Component.
- Member of the International College of Dentists, Brazil.
- Member of the American College of Dentists.
- Diplomate of the Brazilian Board of Orthodontics.
- Director of the Brazilian Board of Orthodontics.

### **Jason Cope**

- Diplomate, American Board of Orthodontics.
- Fellow, American College of Dentists.
- Full Member, Southwest Component, Angle Society of Orthodontists.
- Adjunct Associate Professor, Dept. of Orthodontics, St. Louis University.
- Editor, OrthoTADs: The Clinical Guide and Atlas, [www.UnderDogMedia.us](http://www.UnderDogMedia.us)
- Editor, Comprehensive Orthodontic Continuing Education, [www.CopestheticCE.com](http://www.CopestheticCE.com)

### **José Antônio Bósio**

- Assistant Professor and Director of the Orthodontic Graduate Clinic, Marquette University School of Dentistry, Milwaukee, WI, USA.
- Examiner of the American Board of Orthodontics (ABO) – 2010.
- Director Member of the Wisconsin Society of Orthodontists (WSO) - 2010.
- Prize winner of the American Association of Orthodontists with the Full-Time Faculty Fellowship Award, 2009.
- Diplomate - American Board of Orthodontics (ABO) in 2002 e Voluntarily Recertified in 2009.
- Diplomate – Brazilian Board of Orthodontics (BBO) - 2004.
- MSc in Orthodontics, Ohio State University 1993-1996, Columbus, OH, USA.
- Specialist in TMD, Eastman Dental Center, Rochester, NY, USA 1991-1993.
- Graduated in Dentistry PUC-PR, 1983-1986.
- 11 years - private clinical practice Curitiba, PR and Concórdia, SC, Brazil 1996-2007.

### **Russell T. Kittleson**

- Graduated in Orthodontics, Marquette University School of Dentistry in 1958, Milwaukee, Wisconsin, USA.
- Specialist and MSc in Orthodontics, University of Illinois in 1960, Chicago, Illinois, USA.
- Founder and Adjunct Professor of the Masters Program in Orthodontics, Marquette University in 1961.
- Member of the Edward H. Angle Society of Orthodontics.

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