

**Curriculum Vitae**

**2010**

Name: Mark Guenther Hans

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Office address: Department of Orthodontics  
School of Dental Medicine  
Case Western Reserve University  
10900 Euclid Ave.  
Cleveland, OH 44106-4905

Telephone: (216) 368-4649

Home address: 191 Lee Rd., Berea, Ohio

Telephone: (440) 243-8776

Date of Birth: September 3, 1953, Berea, Ohio

Education: Case Western Reserve University, Cleveland, OH  
Master of Science in Dentistry, Orthodontics 1979-1981  
Case Western Reserve University, Cleveland, OH  
Doctor of Dental Surgery 1975-1979  
Yale University, New Haven, CT  
Bachelor of Science, Chemistry, 1971-1975

Appointments:

Assoc Dean for Graduate Studies, C.W. R.U.	2008-present
Director, The Bolton-Brush Growth Study Center, C.W.R.U.	2006-present
Professor, Department of Orthodontics, C.W.R.U.	2005-present
Visiting Associate Professor, University of Florence, Italy	3/1 – 4/30/04
Presidential Fellow, Case Western Reserve University	2003, 2004, 2007 2008, 2009, 2010
Associate Professor, Department of Orthodontics, C.W.R.U.	1995 - 2005
Assistant Professor, Department of Orthodontics, C.W.R.U.	1989 - 1995
Research Associate, The Bolton-Brush Growth Study, C.W.R.U.	1989 -1991
Assistant Clinical Professor, Department of Orthodontics, C.W.R.U.	1989
Senior Clinical Instructor, Department of Orthodontics, C.W.R.U.	1988
Clinical Instructor, Department of Orthodontics, C.W.R.U.	1984 -1987
Clinical Instructor, Department of Oral Biology, C.W.R.U.	1981-1984

Administrative Appointments:

Associate Dean for Graduate Studies, C.W.R.U.	2008 - present
Director, Bolton-Brush Growth Study Ctr., C.W.R.U.	2006 - present
Interim Director of Research, School of Dentistry	2000 - present
Chairman, Department of Orthodontics, C.W.R.U.	1995 - present
Associate Director, The Bolton-Brush Growth Study, C.W.R.U.	1991 - 2005
Graduate Program Director, Department of Orthodontics, C.W.R.U.	1989 - 2008
Executive Officer, Department of Orthodontics, C.W.R.U.	1989 - 1995

Hospital Appointments:

University Hospitals, Department of Plastic Surgery	2007-present
University Hospitals, Department of Surgery, Division of Oral and Maxillofacial Surgery	1989 - present
Craniofacial Defects Team, Rainbow Babies and Children's Hospital	1988 - present

Dental Licensure

Ohio #16067	1979
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Specialty Certification:

Diplomate, American Board of Orthodontics	1989
Voluntary Recertification, American Board of Orthodontics	2006

Honors and Awards:

Presidential Fellow, Case Western Reserve University	2003, 2004, 2007 2008, 2009, 2010
CWRU Alumnus of the Year Award	2006
Department of Orthodontics Certificate of Excellence and Appreciation	2004
Department of Orthodontics Certificate of Excellence and Appreciation	2003
Department of Orthodontics Certificate of Appreciation	2002
Department of Orthodontics Certificate of Excellence and Appreciation	2001
Department of Orthodontics Certificate of Appreciation	2000
Department of Orthodontics Certificate of Excellence and Appreciation	1999
Department of Orthodontics Certificate of Excellence and Appreciation	1998
Department of Orthodontics Certificate of Excellence and Appreciation	1997
Department of Orthodontics Certificate of Appreciation	1996
Department of Orthodontics Certificate of Appreciation	1995
Department of Orthodontics Certificate of Appreciation	1994
Fellow, American College of Dentists	1993
Department of Orthodontics Award for Dedication to Research	1993
Department of Orthodontics Instructor of the Year Award	1992
Department of Orthodontics Award for Dedication to the Clinic	1989
Harry Sicher First Research Essay Award	1981

Professional and Academic Societies:

American Association of Orthodontists  
 American College of Dentists  
 Great Lakes Association of Orthodontists  
 Ohio Association of Orthodontists  
 Cleveland Society of Orthodontists  
 Edward H. Angle Society of Orthodontists, Midwest Component  
 College of Diplomates, American Board of Orthodontics  
 American Association of Dental Research-Craniofacial Biology Group  
 International Association of Dental Research-Craniofacial Biology Group

Professional Service:

Editorial Review Board:

<i>Sleep and Breathing</i>	2001-present
<i>Journal of Clinical Orthodontics &amp; Research</i>	1998-present
<i>American Journal of Respiratory &amp; Critical Care Medicine</i>	1995-present
<i>NIH/ADAMHA Consultant File, Peer Reviewer</i>	1994-present
<i>American Journal of Orthodontics and Dentofacial Orthopedics</i>	1989-present
<i>The Angle Orthodontist</i>	1986-present

Committees:

C.W.R.U. School of Dental Medicine Executive Committee	2007-present
C.W.R.U. Post-Doctoral Admissions Committee	2006-2008
C.W.R.U. Student Standing and Promotion Committee	2004-2007
C.W.R.U. Clinical Research Scholarship Program Admissions Committee	2002-2009
C.W.R.U. School of Dentistry Faculty Academic Status Committee	2001-present
C.W.R.U. School of Dentistry Dental Education Committee	1999-2001
C.W.R.U. School of Dentistry Predoctoral Admissions Committee	'99-'00, '05-'08
C.W.R.U. School of Dentistry Strategic Planning Committee	1999-2000
C.W.R.U. Faculty Senate Research Committee	1999-2002
The Edward H. Angle Society of Orthodontists Study Committee	1995-2002
American Association of Orthodontists Orthodontic Informatics Oversight Committee Chairman - 1995-1996	1995-1998
Great Lakes Association of Orthodontists Scientific Program Committee Chairman	2000
Great Lakes Association of Orthodontists Council on Education	1995-present
Case Western Reserve University, Review Committee for Human Subjects	1992-2000
C.W.R.U. Information Resources Committee of Faculty Senate	1997-2001
C.W.R.U. School of Dentistry Graduate Studies and Research Committee	1989-present
C.W.R.U. School of Dentistry Department of Orthodontics Graduate Admissions Committee	1989-present

C.W.R.U. School of Dentistry Standing Committee for Clinical Affairs	1995-1998
C.W.R.U. School of Dentistry Nominations Committee	1995-1997
C.W.R.U. School of Dentistry Faculty/Student Relations Committee	1994-1997
C.W.R.U. School of Dentistry Professionals Day Committee Member	1996, 2000
C.W.R.U. School of Dentistry Planning Committee	1994, 1995
C.W.R.U. School of Dentistry Quality Assurance Committee	1994, 1995
C.W.R.U. School of Dentistry Professionals Day Judge	1993
American Association of Orthodontics Chairpersons Conference Focus Group Recorder	1993
American Association of Orthodontists Orthodontic Education Workshop Focus Group Recorder	1992

Consultant:

American Association of Orthodontists FOUNDATION (PARC) Planning and Awards Review Committee	2002
American Association for Dental Research, AADR Council	2002
Edward Reiter Cleft Palate Clinic Team	1996-present
Craniofacial Defects Team, Rainbow Babies and Children's Hospital	1988-present
American Association of Orthodontists Ad Hoc Technology Committee	1993-1995
American Association of Orthodontists Council on Orthodontic Education, Computer Consultant	1992-1993

Official Representative for:

AAO to the ADA Radiographic Guidelines Committee Chicago, IL. December	2003
American Association for Dental Research Council Meeting San Diego. March	2002
AAO 2000 International Educators Conference, Sheraton Chicago Hotel & Towers	2000
American Association of Orthodontists to Board of Directors of Dental Interactive Simulations Corporation (DISC)	1994-1999
American Association of Orthodontists to American Dental Association Dental Informatics Task Force	1994-1995
American Association of Orthodontists to American Association Dental Schools Consortium on Clinical Information systems	1994-2002

Offices Held:

C.W.R.U. Committee on Student Standing and Promotion Chairperson	2005-2006
C.W.R.U. Committee on Dental Education, Chairperson	1999-2000

C.W.R.U. Department of Orthodontics Graduate Admissions Committee Chairperson	1989-2009
C.W.R.U. School of Dentistry Graduate Studies and Research Committee Chairperson	1989-2009 1992, '98, '99, '00, '01, '02, '03, '04, '05, '06, '07, '08, '09
Southwest General Hospital Study Club President	1987, 1988
CWRU Orthodontic Alumni President	1987-1988
Vice president	1986
Secretary	1985
Treasurer	1984
Junior Board Member	1983
Other:	
AAO International Educators Conference, Sheraton Chicago Hotel & Towers	2000
IADR Oral Session Chairman – San Diego, CA	2002
IADR Oral Session Chairman – Washington, DC	2000
IADR Oral Session Chairman – Minneapolis, MN	1998
IADR Oral Session Chairman - Orlando, FL	1997
IADR Oral Session Chairman - San Francisco, CA	1996
IADR Oral Session Chairman - San Antonio, TX	1995

Grants:

American Association of Orthodontists Foundation

“The Legacy Project”

Mark G. Hans, P.I.

7/1/2008 – 6/30/2009

7/1/2009 – 6/30/2010

American Association of Orthodontists Foundation – Faculty Development Award

“A Genetic Epidemiology Approach to Congenital Hypodontia”

Manish Valiathan, P.I.

7/1/02 – 6/30/03

American Association of Orthodontists Foundation – Center Awards

“Digital Storage and Internet Distribution of the Broadbent-Bolton Radiographic Collection”

B. Holly Broadbent, Jr., P.I.

7/1/99-6/30/00 & 7/1/00-6/30/01

6/30/00 – 7/01/01

6/30/01 – 7/01/02

National Institutes of Health, NHLBI

P.I. Dr. Susan Redline (Hans 5% effort first year-10% thereafter)  
Familial Aggregation of Obstructive Sleep Apnea Renewal  
October 1994 to 2001  
Renewed to 2004

American Association of Orthodontists Foundation

M. Valiathan (P.I), M.L Warman, M.G. Hans.  
Genetic Determinants of Craniofacial Form.  
July 1, 2000- June 30, 2001.

American Association of Orthodontists Foundation – Faculty Development Fellowship Award

“Three-Dimensional Cephalometric Analysis of Facial Morphology”  
J. Martin Palomo, P.I.  
7/1/99-6/30/00

American Association of Orthodontists Foundation – Biomedical Research

“Three Dimensional Cephalometric Outcome Assessment  
of Orthognathic Surgical Procedures” P.I. M.G. Hans  
June 1998-May 1999

American Association of Orthodontists Foundation –

1998 Graduate Orthodontic Residency Program Research , P.I. M.G. Hans  
5/1/98 to 4/30/99

American Association of Orthodontists Foundation - Biomedical Research -

Outcomes Assessment  
P.I. Mark G. Hans (10% effort)  
Effect of Provider Education on Orthodontic Outcome  
August 1997-Dec. 98

American Association of Orthodontists Foundation - Biomedical Research

P.I. Mark G. Hans (20% effort)  
Genetic Dissection of Craniofacial Morphologic Traits

National Institutes of Health

P.I. Lysle E. Johnston (Co-Inv. Hans 5% effort)  
Comparative Analysis of Class II Treatments  
5-YR Period

American Association of Orthodontists Foundation

P.I. Dr. David Dean (Hans 5% effort)  
Creation of Internet-accessible Bolton-Brush Growth Study  
WWW (World-Wide-Web) Digital Cephalogram Database.  
October 1994. May 1995

Grants (continued):

NIDR National Institute for Dental Research (NIH Small Grant Program)

Cephalometric Assessment in Obstructive Sleep Apnea

1993 February 1, 1994

American Association of Orthodontists Foundation

P.I. M. G. Hans

Randomized Clinical Trial of a Dental Device for Treatment  
of Snoring and/or Obstructive Sleep Apnea Syndrome

October 1994. May 1995

American Association of Orthodontists Foundation

Co-P.I. M.G. Hans, S. S. Nelson

Computerization of Geoffrey F. Walker's Collection

December 1993. May 1994

American Association of Orthodontists

Determining Grayscale and Spatial Resolution Standards for Digital Storage,  
Retrieval and Analysis of Cephalometric Radiographs, P.I. M.G. Hans

1993

American Association of Orthodontists

Electrical Stimulation of the Muscles of Mastication, P.I. M. G. Hans

November 1993

American Association of Orthodontists Foundation

Electrical Stimulation of the Muscles of Mastication

December 1993

American Association of Orthodontists Foundation 1992

Workshop to Develop Standards for Computer Storage and  
Retrieval of Orthodontic Records, P.I. M.G. Hans

1992-1993

American Association of Orthodontists Foundation

Preservation of the Bolton Collection, P.I. M.G. Hans

1992

American Association of Orthodontists

Identification of Unique Extracellular Matrix Proteins in

Rat Nasal Septum, Condylar, and Synchrondosal Cartilage. P.I. M.G. Hans

1991-1992

American Association of Orthodontists

Computerization of the Bolton Collection. P.I. M. G. Hans

1990

IBM Prototype Computer-Based Library Information Delivery Service  
Sub-Project Director-Computerized storage and retrieval of  
longitudinally collected radiographs. P.I. M. G. Hans  
1990-1992

National Institute of Health  
"Familial Aggregation of Obstructive Sleep Apnea"  
P.I. Susan Redline:  
1990-1995  
(M. G. Hans - 5% Effort)  
Cephalometric appraisal of craniofacial anatomy of patient's with OSA.

Biomedical Research Grant  
"Growth and Development, Following Experimental Restriction  
of the Transverse Maxillary Growth in the Rat" P.I. M. G. Hans

American Association of Orthodontists Grant  
"A Prospective Study of the Effects of Internal Derangement  
of the Temporomandibular Joint, as assessed by Magnetic  
Resonance Imaging, on Growth and Development of the Human  
Face during and after Orthodontic Treatment." P.I. M. G. Hans  
1989

Thesis:

Hans, M.G. "The Effects of Rat Nasal Septum Antibodies on Facial Growth and Development."  
Master's Thesis, Department of Orthodontics, C.W.R.U., 1981.

Publications:

Leung CC, Palomo L, Griffith R, **Hans MG**: "Accuracy and Reliability of Cone-Beam Computed  
Tomography for measuring alveolar bone heights and detecting bony dehiscences and  
fenestrations." Am J Orthod Dentofacial Orthop. 2010 Apr 137(4 Suppl):S109-19.

Valiathan M, El H, **Hans MG**, Palomo MJ: "Effects of extraction versus non-extraction treatment on  
oropharyngeal airway volume." Angle Orthod 2010 Nov 80(6):1068-74.

Kacer KA, Valiathan M, Narendran S, **Hans MG**. "Retainer wear and compliance in the first 2 years  
after active orthodontic treatment." Am J Orthod Dentofacial Orthop. 2010 Nov;138(5):592-8.

Baumgaertel S, **Hans MG**. "Assessment of infrazygomatic bone depth for mini-screw insertion." Clin  
Oral Implants Res. 2009 Jun;20(6):638-42. Epub 2009 Mar 4.

Palomo JM, Rao PS, **Hans MG**. "Influence of CBCT exposure conditions on radiation dose." Oral Surg  
Oral Med Oral Pathol Oral Radiol Endod. 2008 Jun;105(6):773-82. Epub 2008 Apr 18.



- Baumgaertel S, Razavi MR, **Hans MG**. “Mini-implant anchorage for the orthodontic practitioner.” Am J Orthod Dentofacial Orthop. 2008 Apr;133(4):621-7.
- Magni A, de Oliveira Albuquerque R, de Sousa RT Jr, **Hans MG**, Magni FG. “Solving incompatibilities between electronic records for orthodontic patients.” Am J Orthod Dentofacial Orthop. 2007 Jul;132(1):116-21.
- Vaden JL, **Hans MG** “Donald Enlow, M.S., Ph.D.: The consummate student of human facial growth and development.” Cranio. 2008 Jul;26(3):160-1.
- Fisher MA, Wenger RM, **Hans MG**.”Pretreatment characteristics associated with orthodontic treatment duration.” Am J Orthod Dentofacial Orthop 2010 Feb;137(2):178-186.
- Valiathan M, Phoenix A, Palomo M and **Hans MG**. “Cautionary notes on the undesirable secondary effects of long term orthopedic and ventilation mask therapy in the treatment of OSAS.” Revue d’Orthopedic Dento-faciale, 2009;Vol. 43 No. 3.
- Fisher MA, Beeson DC, **Hans MG**.J Dent Educ. “Dental practice network of U.S. dental schools.” 2009 Dec;73(12):1387-93.
- Baumgaertel S, **Hans MG**. “Buccal Cortical Bone Thickness for Mini-implant Placement.” Am J Orthod Dentofacial Orthop 2009;136:230-5.
- Baumgaertel, S., Palomo, J. M., Palomo, L., **Hans, M. G**. “The Reliability and Accuracy of CBCT Dental Measurements.” Am J Orthod Dentofacial Orthop. 2009 Jul;136(1):19-25.
- Feng YM, Fang B, Xia Y, Shu R, **Hans MG**. “Mia-assisted orthodontic treatment for dental malocclusion secondary to periodontal disease.” 2009 World J Orthod Spring; 10(1): 49-56
- Lyotard N, Valiathan M, **Hans MG**, Nelson S, “Short-term post orthodontic tooth movement in the absence of retention.” Submitted.
- Valiathan, M and **Hans MG** “Treatment of OSAS with Oral Appliances.” LaRevue d’Orthopédie Dento-faciale. 2009; 43; 279-299
- Kacer K, Valiathan M, **Hans MG**, Narendran S. “Self reported retainer wear and compliance in the first two years following active treatment.” Accepted. Am J Orthod Dentofacial Orthop
- Palomo, J.M., Rao, P.S., Kwong, J.C., **Hans, M.G**. “Influence of CBCT settings on radiation dose and image quality.” Rev Esp Ortod. 2008 38 (4):289-308.

- Ballrick, J., Palomo, J.M., Ruch, E., Amberman, B.D., **Hans, M.G.** “Image Distortion and Spatial Resolution of a Commercially Available CBCT.” *Am J Orthod Dentofacial Orthop* 2008 Oct;134(4):573-582.
- Kwong, J.C., Palomo, J.M., Landers, M.A., Figueroa, A., **Hans, M.G.** “Image Quality Produced by Different CBCT Settings.” *Am J Orthod Dentofacial Orthop.* 2008;133(1):317-327.
- Hildebrand, J.C., Palomo, J.M., Palomo, L., Sivik, M., **Hans, M.G.** “Evaluation of an ABO Objective Grading System Software on Digital Casts.” *Am J Orthod Dentofacial Orthop.* 2008;133(1):283- 289.
- Palomo, J.M., Kau, C.H., Bahl Palomo, L., **Hans, M.G.** “Three dimensional cone beam computerized tomography in dentistry.” *Int’l Dent SA-Australasian Ed.* 2007 Dec/Jan;2(11):58-65.
- Palomo, J.M., Kau, C.H., Bahl Palomo, L., **Hans, M.G.** “Three dimensional cone beam computerized tomography in dentistry.” *Int’l Dent SA* 2007 Dec/Jan; 9(6):40-49.
- Baumgaertel, S., Palomo, J. M., Palomo, L., **Hans, M.G.** “The Reliability and Accuracy of CBCT Dental Measurements.” *Am J Orthod Dentofacial Orthop* 2009 Jul;136(1):19-25; discussion 25-8.
- Palomo, J.M., Christopher, M., **Hans, M.G.** “The Accuracy and Reliability of CBCT Measurements Using a Custom Phantom.” *Int’l J Comput Assist Radiol Surg.* 2007, 2:422-424.
- Palomo, L., Palomo, J.M., **Hans, M.G.**, Bissada, N. “Image Guided Placement of Temporary Anchorae Devices for Tooth Movement.” *Int’l J Comput Assist Radiol Surg.* 2007. 2:424-426.
- Zhang, X., **Hans, M.G.**, Graham. G., H. Lester Kirchner and Redline, S. “The Correlations Between Cephalometric and Facial Photographic Measurements of Craniofacial Form. *Am J Orthod Dentofacial Orthop* 2007;131:67-71.
- Hans, MG**, Teng, CM, Liao CC, Chen YH, Yang CY. “An evidence-based approach to treatment of open bite and deep bite: Case reports.” *World J Orthod.* 2007;9(1):45-64.
- Bruntz, L.Q., Palomo., J.M., Baden, S., **Hans, M.G.** “A Comparison of Scanned Lateral Cephalograms with Corresponding Original Radiographs.” *Am J Orthod Dentofacial Orthop* 2006 130(3):340-348.
- Jeon YJ, Kim YH, Son WS, **Hans MG.** “Correction of a canted occlusal plane with miniscrews in a patient with facial asymmetry.” *Am J Orthod Dentofacial Orthop.* 2006;130(2):244-252.
- Palomo, J.M., Subramanyan, K., Broadbent, B.H., and **Hans, M.G.** “The 2D and 3D Bolton Standards – Part I.” *Kieferorthopädie Nachrichten (Orthodontic News) – Oemus Media AG.* 2006 Jul/Aug; 7/8:4-5.
- Palomo, J.M., Subramanyan, K., **Hans, M.G.** “Influence of mA settings and a copper filter in CBCT image resolution.” *Int J Compu Assist Radiol Surg* 2006 1:391-393.

- Subramanyan, K., Palomo, J.M., **Hans, M.G.** “Registration and comparison of pre- and post-operative craniofacial CCT images for clinical assessment.” *Int J Comput Assist Radiol Surg* 2006 1:540-541.
- Subramanyan, K., Palomo, J.M., **Hans, M.G.** “Creation of 3D craniofacial standards from CBCT Images.” *SPIE* 2006, 6144: 1599-1608.
- Hans, M.G.**, Groisser, G., Damon, C., Amberman, B.D., Nelson S., and Palomo J.M. “Cephalometric Changes in Overbite and Vertical Facial Height After Removal of Four First Molars or Four First Bicuspid. *Am J Orthod Dentofacial Orthop* – 2006 Aug;183-188.
- Palomo, J.M., Subramanyan, K., **Hans, M.G.** “The Creation of 3D Standards for CT Images. Digital Radiography and Three-Dimensional Imaging.” *Craniofacial Series Vol. 43. Ann Arbor: Center for Human Growth and Development, The University of Michigan.* 2006:231-46.
- Wenger, R., **Hans, M.G.**, Welter, J.F., Solchaga, L.A., Sheu, Y.R. and Malemud, C.J. “Hydrostatic Pressure Increases Apoptosis in Cartilage-Constructs Produced from Human Osteoarthritic Chondrocytes.” *Front BioSci.* 2006. 1;11:1690-1695.
- Kau, C.H., Palomo, J.M., Richmond, S., **Hans, M.G.** “Three-Dimensional Cone Beam Computerized Tomography in Orthodontics.” *J Orthod Britain.* 2005. 32;(4):282-293.
- Palomo, J.M., Yang, C-Y, **Hans, M.G.** “Clinical Application of Three-Dimensional Craniofacial Imaging in Orthodontics” *J Med Sci* Published by National Defense Medical Ctr. Taipei Dec. 2005 Vol. 25 No. 6 pp.269-278.
- Palomo, J.M., Hunt, D.W., **Hans, M.G.**, Broadbent, B.H., Jr. “A Longitudinal 3D Size and Shape Comparison of Untreated Class I and Class II Subjects.” *Am J Orthod Dentofacial Orthop.* 2005. 127;(5):584-591.
- Hans, M.G.**, Valiathan, M. “Bobbing for Apples in the Garden of Eden” *Seminars in Orthod* June 2005 Vol 11, No 2, pp 86-93.
- Palomo, J.M., Wolf, G., **Hans, M.G.** “The Use of Digital Photography in the Case Orthodontic Clinic.” *Am J Orthod Dentofacial Orthop* 2004 126(3):381-385.
- Palomo, J.M., Subramanyan, K., **Hans, M.G.** “Creation of Three Dimensional Data From Bi-plane Head X-rays for Maxillofacial Studies. *Int’l Congress Series. Vol. 1268C pp 1253.*
- Hans, M.G.** “From Angle to the Future: A Perspective.” *Informationen aus Orthodontie und Kieferorthopädie.* June 2004. Heft 2, pp 75-82.
- Hans, M.G.** “Taking Stock: Assessing the Present-Planning the Future” *Orthod Craniofacial Res* 2004. Vol. 7(3):143-149.

- Hans, M.G.**, Le, N.M., Armogan, V., Abei, Y. Bernard, L. Nelson, S. "Orthodontic Care in Suburban Cuyahoga County, Ohio: Who Provides Orthodontic Treatment and Whom Do They Treat?" *Angle Orthod* 2004;74(3):293-297.
- Abei, Y., Nelson, S., Amberman, B.D., **Hans, M.G.** Comparing Orthodontic Treatment Outcome Between Orthodontists and General Dentists Using the ABO Index. *Am J of Orthod Dentofac Orthop* 2004 Nov;126(5):544-548.
- Nelson, S., Armogan, V., Abei, Y. Broadbent, B.H., **Hans, M.G.** "Disparity in Orthodontic Utilization and Treatment Need Among High School Students." *J Public Health Dent* 2004;64(1):26-30.
- Gass, J.R., Valiathan, M, Tiwari, H.K., **Hans, M.G.** and Elston, R.C. "Familial Correlations and Heritability of Maxillary Midline Diastema." *Am J Orthod Dentofac Orthop* 2003;123: 35-39.
- Cakirer, B., Dean, D., Palomo, J.M., **Hans, M.G.** "Orthognathic surgery outcome analysis: 3-dimensional landmark geometric morphometrics." *Int'l J Adult Orthod Orthognath Surg.* 2002;17, (2):116-132.
- Hans, M.G.**, Palomo, J.M., Dean, D., Cakirer, B., Min, K-J, Han, S. and Broadbent, B.H. "Three Dimensional Imaging: The Case Western Reserve University Method." *Sem Orthod* Vol.7, No. 4, pp 233-243, Dec. 2001.
- Hans, M.G.**, Nelson, S., Pracharktam, N., Baek, S-J, Strohl, K.P. and Redline, S. "Subgrouping Persons with Snoring and/or Apnea by Using Anthropometric and Cephalometric Measures. Sleep Breath." 2001 5, (2);79-91.
- Cakirer, B., **Hans, M.G.**, Graham, G., Aylor, J., Tishler, P.V. and Redline, S. "The Relationship Between Craniofacial Morphology and Obstructive Sleep Apnea in Whites and in African-Americans." *Am J Respir Crit Care Med* 2001, 163(4): 947-950.
- Nelson, S., **Hans, M.G.**, Broadbent, B. H., Jr. and Dean, D. "The Brush Inquiry: An Opportunity to Investigate Health Outcomes in a Well Characterized Cohort." *Am J Hum Biol* 2000, 12;(1):1-9.
- Kulnis, R., Nelson, S., Strohl, K.P. and **Hans, M.G.** "Cephalometric Assessment of Snoring and Non-snoring Children." *Chest*, Vol. 118, p. 596-603, Sept. 2000.
- Dean, D., **Hans, M.G.**, Bookstein, F.L., Subramanyan, K. "Three Dimensional Bolton-Brush Growth Study Landmark Data: Ontogeny and Sexual Dimorphism of the Bolton Standards" Cohort. *Cleft Palate Craniofac J* 2000, 37(2):145-156.
- Palomo, J.M., Dean, D., Broadbent, B.H. and **Hans, M.G.** "Three Dimensional Craniofacial Shape change in 16 Female Bolton Faces." In: *The Enigma of the Vertical Dimension. Craniofacial Growth Series, Vol. 36.* Ann Arbor: Center for Human Growth and Development. The University of Michigan. 2000:277-10.

- Bazzucchi, A., **Hans, M.G.**, Nelson, S., Powers, M. and Parker, S. "Evidence of Correction of Open Bite Malocclusion Using Active Vertical Corrector Treatment." *Semin Orthod* 1999;5(2):110-120.
- Mussa, R., **Hans, M.G.**, Enlow, D.H., Goldberg J. "Condylar Cartilage Response to Continuous Passive Motion in Adult Guinea Pigs: A Pilot Study." *Am J Orthod Dentofac Orthop* 1999 115, (4):360-367.
- Brightman, B.B., **Hans, M.G.**, Wolf, G.R. and Bernard, H. "Recognition of malocclusion: An education outcomes assessment." *Am J Orthod Dentofac Orthop* 1999. 116(4):444-451.
- Dean, D., Palomo, M., Subramanyan, K., Hans, M.G., Broadbent, B.H., Jr., Moullas, A. and Macaraeg, O. "Accuracy and Precision of 3D Cephalometric Landmarks from Biorthogonal Plain Film X-rays." 1998 SPIE 3335.
- Holman, J.K., **Hans, M.G.**, Nelson, S., Powers, M.P. "An Assessment of Extraction Versus Nonextraction Orthodontic Treatment Using the Peer Assessment Rating (PAR) Index." *Angle Orthod.* 1998. 68(6):527-534.
- Dean, D., Bookstein, F.L., Koneru, S., Lee, J-H., Kamath, J., Cutting, C.B., **Hans, M.G.**, Goldberg, J. "Average African-American 3D-CT Skull Images: The Potential Clinical Importance of Ethnicity and Sex." *J Craniofac Surg.* 1998. Vol. 9. No. 4.348-359.
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- Hans, M.G.**, Noachtar, R. and Enlow, D.H. “Age-Related Differences in Mandibular Ramus Growth -- A Histologic Study.” J Dent Res (AADR Abstracts) 71:pp202 #772, 1992.
- Prachartam, N., **Hans, M.G.**, Redline, S. and Strohl K.P. “Upright and Supine Cephalometric Evaluation of OSAS and Snoring Subjects.” J Dent Res (AADR Abstracts) 71:pp187, #651, 1992.
- Tsolakis, K., Cain, D. and **Hans, M.** “Response to Mechanical Restriction of Transverse Maxillary Growth in Rats.” J Dent Res (AADR Abstracts) 71: pp203, #784, 1992.

Tsolakis, K., **Hans, M.**, Nelson, S. and Cain D. “Response to Mechanical Restriction of Transverse Maxillary Growth in Rats: Lateral Cephalometric Analysis.” American Association of Orthodontists. Abstract 1991. Selected for presentation AAO Annual Session, May 1992.

**Hans, M.** “Cephalometric Evaluation of Various Treatment Strategies for Deep Overbite Correction.” American Association of Orthodontists. Abstract 1991. Selected for presentation AAO Annual Session, May 1992.

Katz, J. L., Meunier, A., **Hans, M.G.** and Oyen, O. “Scanning Acoustic Microscopy of Bone and Bone-Implant Materials.” Abstract 1992. Abstract. AAID.

**Hans, M.G.**, Scaletta, L.J. and Ochinno J.C. “Immuno-logical Modulation of Midfacial Growth in the Rat.” IADR Progr and Abst (1982) 61: No. 437.

Scaletta, L.J., **Hans, M.G.**, and Ochinno, J.C. “The Effects of Anti-nasal Septum Antibody on Chondrocytes in Cell Culture.” IADR Progr and Abst (1982): 61: No. 589.

Books, Chapters and Monographs:

Enlow, Donald H., **Hans, Mark G.** Essentials of Facial Growth 2<sup>nd</sup> Edition. Needham Press, Ann Arbor, MI 2008

Palomo, J. M., **Hans, M.G.** Three Dimensional Imaging. Chapter in: Ortodontia: Arte e Ciência (Orthodontics: Art and Science) Roberto M. A. Lima Filho and Ana Maria Bolognese – Dental Press. 2007 – Maringa, PR – Brasil. ISBN: 978-85-88020-40-5.

**Hans, M.G.** Orthodontics: Art and Science. Chapter in: Ortodontia: Arte e Ciência (Orthodontics: Art and Science) Roberto M. A. Lima Filho and Ana Maria Bolognese – Dental Press. 2007 – Maringa, PR – Brasil. ISBN: 978-85-88020-40-5.

Dean, D., Mullen, R., Katz, J.L., Totonchi, A., Ahmad, Y., Min, K-J., Wolfe, M., **Hans, M.G.** Non-destructive Methods for Determining the Biomechanical Properties of the Cranium. Craniofacial Growth Series. Ed. J.A. McNamara, Jr. and Katherine Ribbens. 2004 Vol. 41; pp 181-196.

**Hans, M.G.**, O’Callaghan, S., Chen H., Thomas, C., Palomo, J.M., Broadbent Jr., B.H. “Standards for Digital Storage of Cephalometric Radiographs. Information Technology and Orthodontic Treatment.” Craniofacial Growth Series., Ann Arbor, Center for Human Growth and Development. The University of Michigan 2003:93-118

Valiathan, M., **Hans, M.G.** “Retention, relapse and recurrence of malocclusion.” Chapter in *Essentials for Orthodontic Practice*, Michael L. Riolo, Ed. 2003 Needham Press, Ann Arbor, MI pp. 594-616.

- Palomo, J.M., Dean, D., Broadbent, B.H., Jr., **Hans, M.G.** “Three Dimensional Craniofacial Shape Change in Sixteen Female Bolton Faces.” Chapter in: The Enigma of the Vertical Dimension. J. A. McNamara, Jr., *Ed.*, Center for Human Growth, University of Michigan. 2000. Vol. 36, pp 287-310.
- Enlow, Donald H. and **Hans, Mark G.** Essentials of Facial Growth 1st Edition translated into Portuguese. W. B. Saunders Co., Philadelphia, PA 1998.
- Enlow, Donald H. and **Hans, Mark G.** Essentials of Facial Growth 1st Edition translated into Spanish. W. B. Saunders Co., Philadelphia, PA 1998.
- Hans, M.G.** “What the Orthodontist Needs to Know About Obstructive Sleep Apnea.” Practical Reviews in Orthodontics. Vol. 9, No. 5. September 1997.
- Enlow, Donald H. and **Hans, Mark G.** Essentials of Facial Growth. 1st Edition. W. B. Saunders Co., Philadelphia, PA. 1996.
- Hans, M.G.** Department of Orthodontics WEB Site <http://scourge.cwru.edu/ortho/index.html> 1996 - 2005
- Hans, M.G.** C.W.R.U. Department of Orthodontics Policy Manual Update 1990, 1991, 1992, 1993, 1994, 1995. (Moved to the WEB Site 1996)
- Hans, M.** and Goldberg, J. Cephalometric Examination in Obstructive Sleep Apnea” In: Oral and Maxillofacial Surgery Clinics of North America, Peter Waite, Ed. 1995, Vol. 7 (2):269-281.
- Hans, M.G.** Workshop to Develop Standards for Electronic Storage and Retrieval of Orthodontic Records Bolton-Brush Growth Study Workshop. Cleveland Keystone Press Cleveland, OH. 1994.
- Hans, M.G.** “Executive Summary.” Bolton-Brush Growth Study Workshop. March 1993
- Hans, M.G.** "Clinical Use of the Straight Wire Appliance" In: Clinical Dentistry J. B. Lippincott Co. J.F. Hardin, ed. Rev. Ed. 1992 Chapter 26.
- Other Publications:
- Valiathan, M., Tiwari, H.K., Elston, R.C., **Hans, M.G.** Genetic Epidemiology; Dental Phenotypes in Focus. Vol.39; Craniofacial Growth Series. *Ed.* J.A. McNamara, Jr. and K. Kelly. 2002, Pg. 237-255
- Palomo, J.M., Kau, C.H., Bahl Palomo, L., **Hans, M.G.** “Three dimensional cone beam computerized tomography in dentistry.” *Dent Today* 2006: 25(11):130-135.
- Palomo, J.M., Subramanyan, K., Broadbent, B.H. and **Hans, M.G.** “Bolton Standards in 2D and 3D.” *Ortho Tribune – Dental Tribune America* Sept. 2006; Vol. 1, No. 3. pp. 8-11.
- Guest Editor, *Seminars in Orthodontics* – Evidence-based Clinical Practice. 1999 Vol. 5.



Zammit, M., **Hans, M.G.**, Broadbent, B.H., Johnsen, D.C., Latimer, B.M. and S. Nelson. Malocclusion and the need for orthodontic care in the Labrador Inuit youth. May 15-19 AAO Meeting 1993 The New Generation Forum.

Tsolakis, K., Nelson, S., Cain, D and **Hans M.** Response to Long Term Mechanical Restriction of Transverse Maxillary Growth in Rats. American Association of Orthodontists Book of Papers Vol. 1, pp 17, 1993

Zammit, P.M., **Hans, M.G.**, Broadbent, Jr., B.H., Johnsen, D.C., Latimer, B.M. and Nelson S. Malocclusion and Orthodontic Treatment Need in Labrador Inuit Youth. American Association of Orthodontists Book of Papers 1993 Vol. 1, pp 36

Invited Papers and Presentations:

2010 International Orthodontic Congress, Sydney, Australia “3D for You and Me: 21<sup>st</sup> Century Orthodontics” February 9.

Edward H. Angle Meeting, Society of Orthodontists, Chicago, IL “Changes in Buccolingual Inclination of Mandibular Canines and First Molars After Orthodontic Treatment Using CBCT” February 2.

JCEG III

2009 Host of Joint Cephalometric Experts Group II (JCEG II) CWRU Cleveland, Ohio November 12-15.

Fulbright Meeting, Cleveland State University, March 30.

Nanching Medical University, Nanchang, China “Advanced Orthodontics: The CWRU Method” “Essentials of Facial Growth: Clinical Edition” and Western China Medical University Chengdu “Essentials of Facial Growth: Clinical Edition” March 5 – 22.

University of Tennessee, Memphis, TN ½ Day Lecture, “Essentials of Facial Growth: Clinical Edition – The CWRU Method” February 27.

Fulbright Meeting, University of Akron, Ohio January 30.

Edw. Angle Society of Orthodontists, “Cone Beam Computer Tomography: The First 100 Cases.” Bonita Springs, FL January 17 – 21.

2008 Host of Joint Cephalometric Experts Group (JCEG) CWRU Cleveland, Ohio November 21-23.

University of Melbourne (Australia) “Essentials of Facial Growth: Clinical Edition” October 18, 19.

- Peking University Opening of the AmeriChin Dental School, Shanghai, China October 8 – 17.
- American Association of Orthodontists, “The Role of the Orthodontist Treating Children with Sleep Apnea” Denver, CO May 16.
- Peking University C.E. Course “Advanced Orthodontics: The Case Method”, Beijing, China. April 21.
- OERF Orthodontic Education and Research Foundation, St. Louis University, St. Louis, MO. “Cone Beam Imaging: Answers in Search of Questions.” March 7.
- Midwest Component of the Angle Society Meeting “Sleep Apnea – New Tricks for an Old Dog” Honolulu, Hawaii January 31
- 2007 Korean Association of Orthodontists “Facial Growth and Clinical Orthodontics: What have we learned?” November 2
- Tokyo Orthodontic Society “Orthodontics – the Case Method” Tokyo, Japan October 30
- Enrichment Seminar on Cone Beam Technology. The Ohio State University Dept. of Orthodontics August 27.
- French Society of Orthodontics Annual Meeting, “Genetic and Functional Aspects of Growth and Development” and “Clinical Implications of the Contemporary Knowledge of Growth and Development.” Versailles, France May 31- June 2.
- Shanghai Jiaotong University, Shanghai, China and Peking University, Beijing, China “Class III Treatment – The Case Method” April 2007.
- Maryland Association of Orthodontists. “Cone Beam Computed Tomography: To Buy or Not to buy?” Columbia, MD January 24.
- Midwest Angle Society. “Cone Beam Computed Tomography: To Buy or Not to buy?” Indian Wells, CA. January 26-31
- 2006 Alexandria International Dental Congress. “Advanced Orthodontic Diagnosis and Treatment Planning for Class III patients“ Alexandria,, Egypt. November 14 – 17.
- 9<sup>th</sup> Panhellenic Orthodontic Congress, Athens, Greece. “Incorporating Cone Beam Computed Tomography into Your Orthodontic Practice” Sept. 30. “The Impact of Craniofacial Growth on Orthodontic Treatment” October 2.
- American Association of Orthodontists Annual Meeting, Las Vegas “Cone beams for cone heads.” May 9-11.

School of Stomatology of Xi'an Jiao Ton University, "Evidence Based Treatment of Class III Malocclusion" Xi'an, China March 3. Bo-Fan Dental Clinic "Evidence Based Treatment of Class III Malocclusion" HangZhou, China March 1. School of Stomatology, Tong-Ji University "Evidence Based Treatment of Class III Malocclusion" Shanghai, February 27. Peking University School of Stomatology "Evidence Based Treatment of Class III Malocclusion" Beijing February 24.

Edw. Angle Society of Orthodontics, Tucson, AZ. "Cone beams for cone heads." February 4 – 8.

2005 ADEA 47<sup>th</sup> Dean's Conference, "Rethinking Pre-doctoral Orthodontic Education" Fort Lauderdale, FL November 6 – 9.

Ibero/American Orthodontic Society, Madrid, Spain. "What Every Orthodontist Should Know About Sleep Apnea," "Orthodontics: The Art of the Science," "Digital Imaging in Orthodontics," "Cleft Lip and Palate Treatment." October 21-22.

American Association of Orthodontists Annual Meeting, San Francisco, CA "The Art of the Science." May 19-24

International Association for Dental Research, Baltimore, MD. "Using Cephalometric Radiographs to Identify Teenagers with Sleep Apnea." March 9 – 12, 2005.

The Midwest Component of The Edward H. Angle Society of Orthodontists, Naples, FL. "Identifying Teenagers with Sleep Disordered Breathing." January 29-February 2

Minnesota Orthodontic Association "Imaging in Orthodontic Practice" January 7.

2004 Midwestern Society of Orthodontists/Great Lakes Association of Orthodontists Annual Session. Chicago, IL "Orthodontics-Science of the Art" October 1 – 3.

International Congress of Orthodontists in Ponta Grossa, Brazil. "Orthodontics: A practical approach to clinical orthodontics" September 15.

National Science Council of Republic of China Mtg., Taiwan. "Genes for you and me – A clinician's guide to craniofacial genetics" and "Principles of Practical Orthodontics" and "Outcomes Studies in Orthodontics" May 24 – June 11.

American Association of Orthodontists Mtg., "Comparing Different Strategies for Correction of Deep or Open Bites." Orlando, FL April 30 - May 4

University of Florence, Florence, Italy "Practical Orthodontics: Art and Science." "Evidence Based Decision Making in Clinical Practice." - March 1 - April 25, 2004.

The Midwest Component of the Edward H. Angle Society of Orthodontists, Scientific Program, Key Biscayne, FL "Vertical Vertigo: Comparing Different Strategies for Correction of Deep or Open Bites." January 26.

2003 American Association of Orthodontists Representative to the ADA Guidelines Radiology Mtg., Chicago, IL. December 11.

Lysle E. Johnston, Jr. Retirement Celebration-Continuing Education – “Taking Stock: Assessing the Present; Planning the Future.” University of Michigan, Ann Arbor, MI October 3.

Midwest Component of The Edward H. Angle Society of Orthodontists 35<sup>th</sup> Biennial Mtg., Bronson, Missouri. “From Angle to the future: A perspective” Sept. 11-16.

American Association of Orthodontists Annual Mtg., Honolulu, Hawaii. “The Professional Orthodontist: To Be or Not to Be.” May 2-9.

American Association for Dental Research, San Antonio, TX “Comparing Orthodontic Treatment Outcome Between Orthodontists and General Dentists Using the ABO Index.” March 13-14.

Angle Society Meeting, Cayman, BWI. “More Myths and Monsters: Orthodontics in the Dark Ages of the 22<sup>nd</sup> Century.” January 17 – 24.

2002 Università Cattolica Del Sacro Cuore, Facoltà Di Medicina e Chirurgia “Agostino Gemelli,” Istituto Di Clinica Odontoiatrica, Scuola Di Specializzazione in Ortognatodonzia, Rome, Italy “The Orthodontist & SDB” November

LaSapienzia, Rome Italy “3D Imaging Technology” November 14.

University of Florence “Outcomes Assessment in Orthodontics” November

AAO Meeting, Philadelphia, PA Doctors’ Scientific Program, “Myths and Monsters: In My Closet and Under My Bed” May 5.

AADR/IADR Mtg. Philadelphia, “Heritability of Head and Facial Form in Caucasian Families,” March

Moyer’s Symposium, University of Michigan, Ann Arbor, MI “Electronic Storage and Retrieval of Cephalometric Radiographs” February 23.

Mississippi Association Orthodontists Winter Meeting, Jackson, MS. “Genes for you and me – A clinician’s guide to craniofacial genetics” and “Principles of Practical Orthodontics” and “Outcomes Studies in Orthodontics” February 2.

Angle Society Meeting, “Genes for you and me – A clinician’s guide to craniofacial genetics” January 19-23.

2001 AAO Meeting, Toronto, Ont. Canada. “3-D Imaging or Imagination.” May 5 – 9.

- Ann Arbor Ortho Study Group, “Rip Van Winkle Meets Edward Hartley Angle or What Every Orthodontist should Know About Obstructive Sleep Apnea” April 17.
- Moyers’ Pre-symposium - Twenty-seventh Annual Conference on Craniofacial Research. “Digital Curation of the Bolton-Brush Growth Study.” University of Michigan, Ann Arbor February 23.
- The Midwest Component, Edw. H. Angle Society Meeting, Naples FL “Poor Man’s C.T. - A Three Dimensional Digital Treatment Record for Orthodontics.” January 27-31
- 2000 Seminar. King’s College, London, England. “Three Dimensional Imaging in Orthodontic Practice” November 6
- Seminar. St. Bartholomew’s and the Royal London School of Medicine and Dentistry. Whitechapel, U.K. “Obstructive Sleep Apnea” November 10
- American Academy of Sleep Medicine, APSS Annual Mtg., Las Vegas, “Craniofacial Anatomy and Sleep Apnea.” June 17-22
- AAO Meeting, Chicago, IL “Imaging in Orthodontics – Sales or Service?” April 28 – May 5
- The Angle Society Meeting, St. Thomas, V.I., “Truth or Dare – Outcomes Assessment in Orthodontics.” January 14-19
- 1999 The Northeastern Society of Orthodontists’ 78<sup>th</sup> Annual Meeting, Boston, MA. “Three-Dimensional Imaging” December 5
- Faculté de’ Chirurgie Dentaire, Université de Paris VII, Paris, France “Oral Rehabilitation of the Cleft Lip and Palate Child” November 3
- Colombia Society of Orthodontists, St. Andres, Colombia, S.A. (1) “Oral Rehabilitation of the Cleft Lip and Palate Child.” (2) “Evidence Based Orthodontic Practice.” (3) “Outcomes in Orthodontics – Who Provides Care.” October 11-16
- American Association of Orthodontists Annual Session, San Diego, CA. – Facilitator and Focus Group Recorder at Chairmen Conference, May 14 Diagnosis and Treatment Planning Session “Three Dimensional Cephalometrics.” May 15, and Quality of Treatment Session “Who Does What to Whom.” May 16
- International Association of Dental Research Annual Meeting, Vancouver, B.C., Canada. Oral Presentation: “3D Cephalometric Analysis of Patients with Sleep Apnea” February 12
- International Association of Dental Research Annual Meeting, Vancouver, B.C., Canada. Poster Presentation “Utilization of Orthodontic Services in Cuyahoga County Ohio” February 12
- 1998 The CWRU Center for Sleep Disorders, University Hospitals & V.A. Med. Ctr.,

Cleveland. Primary Care Management of Sleep Apnea. "Snoring Prescriptions."  
The Cleveland Health Museum, Cleveland, OH. November 4,

Thessaloniki Orthodontic Society, Thessaloniki, Greece, "Evidence Based  
Clinical Practice." October 1

5<sup>TH</sup> Panhellenic Orthodontic Conference. Athens, Greece, "The Orthodontist and  
Obstructive Sleep Apnea." September 30

American Association of Orthodontists Meeting, Dallas, TX. "Orthodontic Providers:  
Who Does What to Whom" May 16

American Association of Orthodontists Meeting, Dallas, TX. Moderator - Doctors'  
Scientific Program on Imaging May 19

American Association of Dental Schools Meeting, "Toward a Paperless Office - The Treatment  
Records" Minneapolis, MN March 2

Lorain County Dental Society "The Who, What, When, Where and Why of Orthodontic  
Treatment" All day C.E. Course. Holiday Inn, Midway Mall, Elyria, OH February 18.

Edward H. Angle Society Midwest Component, "Outcome Assessment in Orthodontics"  
Milwaukee, WI. February 10. 1974.

1997 Edward H. Angle Society Biennial Meeting, "The Use of Dental Devices for Treatment of  
Obstructive Sleep Apnea and/or Snoring." October. Williamsburg, VA

American Association of Orthodontists Meeting, Philadelphia, PA. May 5: Doctors'  
Roundtable Computers in Orthodontic Practice

American Association of Orthodontists Meeting, Philadelphia, PA. May 3-7. Doctor's Scientific  
Program 10:00 a.m. May 4: "An Orthodontic Perspective on Obstructive Sleep Apnea."

Korea Speaking Tour. April 1-13. Kyong-Ju, Korea Two day course: "Evidence Based  
Orthodontic Practice"; Pusan National University, Pusan, Korea: "Orthodontic Management of  
the Cleft Palate Child."; Orthodontic Forum, Seoul, Korea: "Orthodontics and Cleft Lip and  
Palate."; Seoul, Korea: "Evidence Based Clinical Orthodontics."

American Association of Orthodontists Ski Philadelphia Technology Conference - Presentation:  
"Advanced Imaging in Orthodontic Practice."

Angle Society Midwest Component, Naples, FL February 8-13  
"3D Imaging in Orthodontics"

1996 Great Lakes Association of Orthodontists, Traverse City, MI. September 7-10  
"Obstructive Sleep Apnea: Facts and Fictions."

- Michigan Cleft Palate Association, Traverse City, MI. May 31-June 1 “Normal Dental Development and Facial Growth.”
- American Association of Orthodontists Meeting, Denver, CO. May 13 Roundtable Discussion “Information Technology and Orthodontic Practice”
- American Association of Orthodontists Meeting, Denver, CO. May 11-15. “Orthodontic Diagnosis: Who, What, When and Why?”
- American Association of Orthodontists Educators Meeting, Denver, CO. May 11-15. Facilitator “Effective Instruction in Predoctoral Orthodontic Education.”
- American Association of Dental Research Annual Mtg., San Francisco. Presentation: “Assessing Extraction vs. Non-Extraction Orthodontic Treatment Using the PAR Index.”
- CWRU, School of Dentistry, Interdisciplinary Seminar, February 27. “Craniofacial Aspects of Obstructive Sleep Apnea”
- Angle Society Midwest Component Chicago, IL January 24. “Random Clinical Trials of Two Dental Devices for Treatment of Snoring and/or Sleep Apnea”
- 1995 Rocky Mountain Society of Orthodontists, Phoenix, AZ. November 13. “Orthodontics and Obstructive Sleep Apnea.”
- American Association of Orthodontists Meeting, San Francisco. May 12-17. Roundtable Discussion Leader “Orthodontist’s Role in Obstructive Sleep Apnea Syndrome.”
- American Association of Orthodontists Meeting, San Francisco. May 12-17. “Racial Differences in African American and Caucasians with Obstructive Sleep Apnea.”
- Presentation at CWRU to visiting Korean Orthodontists May 4-9. “Orthodontic Management of the Cleft Child”
- American Association of Dental Research/Canadian Association of Dental Research 24th Annual Meeting, March 8-10, San Antonio TX. “Identifying Apneic and Non-Apneic Snorers Using Craniofacial Index Scores.”
- American Association of Dental Research/Canadian Association of Dental Research 24th Annual Meeting, March 8-10, San Antonio TX. Session #19 Co-Chairperson, “Craniofacial Biology-Respiration and Obstructive Sleep Apnea”
- Edward H. Angle Society, Midwest Component. February. Tucson, AZ “The Orthodontists Role in Obstructive Sleep Apnea”
- 1994 North Coast Meeting, Ohio Dental Association, Cleveland, OH, May 13 “Orthodontics for the General Practitioner”

American Association of Dental Research/International Association of Dental Research Meeting  
Seattle WA Research Presentation "Identification of Unique Extracellular Matrix Proteins in  
Rat Craniofacial Cartilages." IADR 72nd General Session & Exhibition Abst. 1994

American Association of Orthodontists Meeting, Orlando, FL May 2, Roundtable Breakfast  
"The Orthodontist's Role in the Multidisciplinary Treatment of Obstructive Sleep Apnea  
Syndrome"

American Association of Orthodontists Meeting, Orlando, FL May 1, Research Abstract  
Presentation "Spatial Resolution of Cephalometric Radiographs"

Greater Cleveland Dental Society Continuing Education Program, Cleveland Health Education  
Museum, Cleveland, Ohio February 27 "Orthodontic Considerations in the Treatment of  
Patients with Craniofacial Deformities"

Midwest Component Angle Society, Ritz Carlton Hotel, Cleveland, Ohio, January 19 "Research  
in Orthodontics at Case Western Reserve"

1993 "Does Orthodontics Cause TMJ Problems?" Doan Study Club, Wellington's Restaurant,  
Cleveland Ohio. November 2, 1993.

Angle Society Biennial Meeting, Discussor, Dr. David Sarver Presenter, "Trends and Research  
With Computerized Video Technology" Grove Park Inn, Asheville, North Carolina, October  
26, 1993

Pediatrics Today" Maxillofacial Program Rainbow Babies and Children's Hospital, June 22,  
1993 "Early Diagnosis and Treatment of Dentofacial Deformities"

American Association of Orthodontists, Toronto, Ont., Canada May 17 Breakfast Roundtable  
"Bits and Bytes of Image Storage"

American Association of Orthodontists Meeting, Toronto, Ont., Canada. May 17 "Physiologic  
Rebound After Transverse Maxillary Constriction in Growing Rats"

American Association of Orthodontists Chairmen's Conference, Toronto, Ont., Canada May 15  
General Session "Report on Workshop to Develop Standards for Computer Storage and  
Retrieval of Orthodontic Records"

1992 American Association of Orthodontists, St. Louis, MO "Cephalometric Evaluation of  
Various Treatment Strategies for Deep Overbite Correction" May 12

Angle Society, "Treatment of an Asymmetric Class II Malocclusion - A Case Report" and "A  
Comparison of Various Treatment Strategies for Deep Bite Correction" January. Chicago,  
Illinois



- 1991 CWRU School of Medicine, Dept. of Medicine Postgraduate Curriculum, Second Annual Specialty Medicine for the Primary Practitioner. "Recognition and Treatment of Problems Associated with the Temporomandibular Joint Articulation" September. Cleveland, Ohio
- American Association of Orthodontists, Seattle, WA, May Breakfast Roundtable. "TMJ Complications Following Orthognathic Surgery"
- American Association of Orthodontists, Seattle, WA, May. "A Prospective Study of the Effects of Internal Derangement of the Temporomandibular Joint, As Assessed by Magnetic Resonance Imaging, on Growth and Development of the Human Face During and After Orthodontic Treatment"
- American Association of Orthodontists, Seattle, WA. Table Clinic: "Current Research at Case Western Reserve University" May
- Angle Society, Sanibel Island, Florida, February "Growth Rotation of the Human Mandible"
- American Association of Orthodontists Chairmen's Conference, January. Dallas, TX
- Northeast Ohio Dental Study Club. January. "The CWRU TMJ Diagnostic Protocol"
- 1990 Sociedad Colombiana De Ortodoncia, University Javeriana, Bogota, Colombia, S.A., "The CWRU Method of Orthodontic Diagnosis and Treatment Planning for Patients with TMJ Dysfunction", Current Research at CWRU", "Orthodontic Management of Patients with Cleft Lip and Cleft Palate Deformities" and "Orthodontic Management of the Dentally Compromised Patient" November 2 - 3.
- The Great Lakes Association of Orthodontists, Colorado Springs, CO., Table Clinic - "Current Research at Case Western Reserve University" This won the Table Clinic Academic Institution Award.
- The Great Lakes Association of Orthodontists, Colorado Springs, CO., "The Prevalence of Internal Derangement of the Temporomandibular Joint in the Teenage and Pre-Teen Age Orthodontic Population: Implications for Clinical Treatment"
- University of North Carolina, Chapel Hill "Orthodontics and the Temporomandibular Joint - The CWRU Method"
- American Association of Orthodontists, Washington, D.C. May 1990. Breakfast Roundtable "Post-Surgical Management of Condylar Position Following LeFort I Impaction of the Maxilla"
- 1989 American Association of Orthodontists, Anaheim, CA Breakfast Roundtable: "TMJ Complications in Orthognathic Surgery."
- 1988 University Hospitals of Greater Cleveland, Department of Plastic and Reconstructive Surgery. Invited Lecture - "Orthodontic Assessment of the Cleft Lip and Palate Patient."

- Northwest Dental Society, Sandusky, Ohio Invited Lecture - "Contemporary Diagnosis and Treatment Planning of Patients with TMJ Dysfunction."
- Great Lakes Association of Orthodontists, Toronto, Ontario, Table Clinic - "Post-Operative Management of Complications in Orthognathic Surgery."
- 1987 Case Western Reserve University Continuing Education Invited lecture - "Orthodontics and the TMJ"
- Case Western Reserve Department of Continuing Education One day Course given with Dr. Clifford Fox. "Orthodontic Treatment of Patients with TMJ Dysfunction after Successful Splint Therapy"
- Great Lakes Society of Orthodontists, Pittsburgh, Pa. Breakfast Roundtable - "A Modified Lower Protrusive Splint for Diagnosis and Treatment Planning for Patients with Symptoms of TMJ Dysfunction"
- 1986 Case Western Reserve University Continuing Education Invited lecture - "Orthodontics and the TMJ"
- Southwest General Hospital Dental Study Club Case Presentation - "Combined Frankel and Fixed Orthodontic Treatment of a Severe Class II Malocclusion"
- Great Lakes Society of Orthodontics Meeting Williamsburg Table Clinic - "A Cephalometric Appraisal of TMJ Treatment"
- 1985 Case Western Reserve University Continuing Education Invited lecture - "Orthodontics and the TMJ"
- 1984 Akron Crown and Bridge Study Club Invited lecture - "Orthodontic Stabilization of Patients with Dysfunctional Temporomandibular Joints."
- University of California at Los Angeles School of Dentistry - Section on Orthodontics Invited lecture - "The Use of Anti-cartilage Antibodies to Affect Facial Growth"
- 1983 Southwest General Hospital Pediatric Staff Invited lecture - "Diagnosis and Treatment of Developmental Dental Malocclusions."
- University of Michigan - Department of Orthodontics Invited lecture - "Anti-Rat Cartilage Antibodies and their Effect on Facial Growth of the Sprague-Dawley Rat"
- 1982 Southwest General Hospital Pediatric Staff Invited lecture - "Early diagnosis of Skeletal Malocclusions"
- Moyer's Pre-Symposium on Craniofacial Growth - "The Effects of Rat Anti-nasal Septum Antibodies on Rat Facial Growth and Development."

American Association of Orthodontists Meeting Atlanta, GA – Sicher Award - "The Effects of Rat Anti-nasal Septum Antibodies on Rat Facial Growth and Development."

Case Western Reserve Orthodontic Alumni Meeting Cleveland, OH, - "The Effects of Rat Anti-nasal Septum Antibodies on Rat Facial Growth and Development."

1981 Cleveland Crown and Bridge Study Club - "Differential Diagnosis of Patients with TMJ Disease"

1980 American Association of Orthodontists Meeting New Orleans, LA Table Clinic - "Contemporary Edgewise Technique"

Graduate Students Supervised: **(Bold type indicates current involvement in orthodontic education)**

Thesis Advisor - Eleftheria Karamitsou, D.D.S.

“A method to measure buccolingual in clinical maxillary first molars and canines using CBCT.” (working title) Master’s Thesis, Case Western Reserve University.

Current

Thesis Advisor – Nikolaos Evangelinakis, D.D.S.

“Changes in buccolingual inclination of mandibular canines and first molars after orthodontic treatment using CBCT.” Master’s Thesis, Case Western Reserve University.

Current

**Co-Advisor – Xing-Zhong “John” Zhang, D.D.S.**

“Effects of Rapid Maxillary Expansion Followed by Inter-Maxillary Elastic Traction on Skeletal Class III Patients with Permanent Dentition.” Master’s Thesis, Case Western Reserve University

Current

Co-Advisor - Cynthia Leung, D.D.S. “Accuracy and Reliability of Cone Beam Computed Tomography for Measurement of Alveolar Bone Height and Detection of Bony Dehiscences and Fenestrations” Master’s Thesis, Case Western Reserve University.

2009

Thesis Advisor – Wanvadee Shewinvanakitku, D.D.S.

“A new method to measure buccolingual inclination using CBCT.” Master’s Thesis, Case Western Reserve University.

2009

Thesis Advisor – Austin Phoenix, D.D.S., M.S.D. “Changes in hyoid bone position following rapid palatal expansion in adolescents” Master’s Thesis, Case Western Reserve University.

2008

Thesis Advisor - \***Sebastian Baumgaertel, D.D.S., M.S.D.** “The Reliability and Accuracy of Dental Arch Measurements on Three-Dimensional Cone Beam Computed Tomography Scans.”

2007

- Thesis Advisor – Reid Wenger, D.D.S., M.S.D. “Predicting the Duration of Active Orthodontic Treatment Using Pre-treatment Variables.” Master’s Thesis, Case Western Reserve University. 2007
- Thesis Advisor - Michael Paulus, D.D.S., M.S.D. “An Evaluation of Dental Arch Relationships Among Children with Unilateral Cleft Lip and Palate Treated at Two Different Centers” Master’s Thesis, Case Western Reserve University. 2006
- Thesis Advisor – David Lenhart, D.D.S., M.S.D. “Craniofacial Phenotypic Variation Between Two Laboratory Mouse Strains, the B6 and A/J.” Master’s Thesis, Case Western Reserve University. 2004
- Thesis Advisor - Nawaf Masri, D.D.S., M.S.D. “The Change of Lower Incisor Mandibular Plane Angle During Orthodontic Treatment.” Master’s Thesis, Case Western Reserve University. 2003
- Thesis Advisor - Rachel Hamilton, D.D.S., M.S.D. “Efficacy of Early Treatment Using the Index of Complexity, Outcome and Need.” Master’s Thesis, Case Western Reserve University. 2002
- Thesis Advisor - \***Alexandros Moullas, D.D.S., M.S.D.** “Craniofacial Phenotypic Variations Among Laboratory Rat Strains.” Master’s Thesis, Case Western Reserve University. 2002
- Thesis Advisor - James J. Galati, D.D.S., M.S.D. “Phenotypic Characterization of Rat Craniofacial Morphology in a Brown-Norway Sprague Dawley F1 Cross.” Master’s Thesis, Case Western Reserve University. 2001
- Thesis Advisor - \***William Nguyen, D.D.S., M.S.D.**  
“Pretreatment Occlusal Differences Between Patients Treated by Orthodontists and General Dentists.” Master’s Thesis, Case Western Reserve University. 1999
- Thesis Advisor - \***SoonJung Park, D.D.S., M.S.D.**  
“Genetic study of craniofacial traits in rats.” Master’s Thesis, Case Western Reserve University. 1999
- Thesis Advisor - \***Manish Valiathan, B.D.S., M.D.S., M.S.D.**  
Comparing Cephalometrics Based Clinical Decisions Among Experienced Orthodontists and Two Software Programs.” Master’s Thesis, Case Western Reserve University. 1999
- Thesis Advisor - Vidya Armogan, D.D.S., M.S.D.  
“Assessing treatment need in 10<sup>th</sup> grade students in Cuyahoga County, Ohio.” Master’s Thesis, Case Western Reserve University. 1998

- Thesis Advisor - Charissa Katzan, D.D.S., M.S.D.  
“Outcome Assessment of 1-Phase and 2-Phase Orthodontic Treatment.”  
Master’s Thesis, Case Western Reserve University. 1998
- Thesis Advisor - \***Nhat Minh Le, D.M.D., M.S.D.**  
“Utilization of orthodontic services and outcome of treatment in Cuyahoga  
County, Ohio.” Master’s Thesis, Case Western Reserve University. 1998
- Thesis Advisor - Clarence Red, D.D.S., M.S.D.  
“The Effects of Operator Experience on Orthodontic Treatment Outcome.”  
Master’s Thesis, Case Western Reserve University. 1997
- Thesis Advisor - \***Virginia Luks, D.D.S., M.S.D.**  
“Dental Device Treatment for Obstructive Sleep Apnea Syndrome.”  
Master’s Thesis, Case Western Reserve University. 1997
- Thesis Advisor - Andrea Bazzucchi, D.D.S., M.S.D.  
“Use of the Active Vertical Corrector in Non-extraction Treatment of Open Bite  
Malocclusion.” Master’s Thesis, Case Western Reserve University. 1996
- Thesis Advisor - \***Seung-Jin Baek, D.D.S., M.S.D., Ph.D., M.S.D.**  
“Correlating Cephalometric and Anthropometric Measurements with  
Physiologic Measurements of Sleep.” Master’s Thesis, Case Western  
Reserve University. 1996
- Thesis Advisor - Clay Damon, D.D.S., M.S.D.  
“A cephalometric evaluation of orthodontic treatment of excessive overbite”  
Master’s Thesis, Case Western Reserve University. 1995
- Thesis Advisor - J. Kevin Holman, D.M.D., M.S.D.  
“An Assessment of extraction vs. non-extraction orthodontic treatment using  
the PAR (Peer Assessment Rating) index.” Master’s Thesis, Case Western  
Reserve University. 1995
- Thesis Advisor - Luigi Di Battista, D.D.S., M.S.D. “Electrical Stimulation of the  
Masseter Muscles.” Master’s Thesis, Case Western Reserve University. 1994
- Thesis Advisor - Martha Chun, D.M.D., M.S.D. “Transverse Changes  
in the Adult Craniofacial Complex.” Master’s Thesis, Case Western Reserve  
University 1993
- Thesis Advisor - \***Nonglak Prachartam, D.D.S., M.S.D.** “Cephalometric  
Assessment of Obstructive Sleep Apnea.” Master’s Thesis, Case Western Reserve  
University 1993
- Thesis Advisor - Sean O’Callaghan, B.D.Sc., M.S.D. “Spatial Resolution  
of Cephalometric Radiographs.” Master’s Thesis, Case Western Reserve University 1993

- Thesis Advisor - Mark P. Zammit, B.D.S., M.S.D.  
"The Epidemiology of Malocclusion and the Need for Orthodontic Treatment in (Northern) Labrador Inuit Youths." Master's Thesis, Case Western Reserve University 1992
- Thesis Advisor - \***Hung Tuan (Frank) Nguyen, D.D.S., M.S.D.**  
"An Antisera Altering Rat Mid-Facial Development Reacts with Cartilage Proteoglycan and Other Matrix Proteins." Master's Thesis, Case Western Reserve University 1992
- Thesis Advisor - Konstantinos Tsolakis, D.D.S., M.S.D.  
"Growth and Development Following Experimental Restriction of the Transverse Maxillary Growth of the Rat." Master's Thesis, Case Western Reserve University 1991
- Thesis Advisor - Daniel Kruse, D.D.S., M.S.D.  
"A Comparison of Dentofacial and Temporomandibular Joint Morphology in Children and Adolescents." Master's Thesis, Case Western Reserve University 1991
- Thesis Advisor: \***Georges Rozencweig, D.C.D., M.S.D.**  
"A Comparison of Axio-graph Findings with Magnetic Resonance Images of the Temporomandibular Joint in Patients with Symptoms of Masticatory Dysfunction." Master's Thesis, Case Western Reserve University 1990
- Thesis Advisor - \***Sophie Lustman Rozencweig, D.C.D., M.S.D.**  
"Influencing Patient Cooperation in Orthodontic Treatment." Master's Thesis, Case Western Reserve University. Video Received the Golden Reel Award 1990
- Thesis Advisor - Stephan H. Parker, D.D.S., M.S.D.  
"Treatment of Deep Overbite with Cervical Pull Facebow Headgear in Eury-, Meso-, and Leptoprosopic Individuals." Master's Thesis, Case Western Reserve University 1990
- Thesis Advisor - Roxanna Mussa-Contreras, D.D.S., M.S.D.  
"The Effect of Continuous Passive Motion on Healing After Intracapsular Temporomandibular Joint Surgery in Guinea Pigs." Master's Thesis, Case Western Reserve University 1989
- Thesis Advisor - Walter Schratz, D.D.S., M.S.D.  
"A Study of Basicranial Asymmetry and its Relationship to Facial Morphology and the Mandible." Master's Thesis, Case Western Reserve University 1989
- Thesis Advisor - Andrew Slodov D.D.S., M.S.D.  
"Characterization of the Protein Components of Condylar, Nasal Septum, and Epiphyseal Cartilage of the Rat." Master's Thesis, Case Western Reserve University 1989

Thesis Advisor - Craig Kishiyama, D.D.S., M.S.D.  
"An Evaluation of Response to Orthodontic Treatment of Deep Overbite in Eury-,  
Meso-, and Leptoprosopic Individuals." Master's Thesis, Case Western Reserve  
University. 1987

Thesis Committee Member for:

Lindsey Schilling, D.M.D.  
"A new method to measure mandibular intercanine width at the cusp tip  
and at the center of resistance using CBCT scans before and after  
orthodontic treatment." Master's Thesis, Case Western Reserve  
University. 2011

Brent Paulus, D.D.S.  
"Case control study of bone thickness buccal and lingual to the maxillary  
first molar roots before and after orthodontic treatment." Master's Thesis,  
Case Western Reserve University. 2011

Robert Park, D.M.D.  
"Force/deflection properties of new and retrieved .014" and .016" NiTi wires."  
Master's Thesis, Case Western Reserve University. 2011

Lisa Austin, D.M.D.  
"A Study of the Orthodontic Retention Preferences of  
General Dentists in the U.S." Master's Thesis, Case Western Reserve  
University. 2010

David Sullivan, D.D.S.  
"Airway volume changes in adolescents treated orthodontically."  
Master's Thesis, Case Western Reserve University. 2010

Monica Velez, D.M.D. "Surface Area and Root Length Changes on  
Maxillary Incisors After Orthodontic Treatment" Master's Thesis,  
Case Western Reserve University. 2010

Kurt Kacer, D.M.D., M.S.D.  
"Self-Reported Retainer Wear Status." Master's Thesis, Case Western  
Reserve University. 2009

Breyn Peters-Schuster, D.D.S., M.S.D.  
"Developing a method to measure airway  
using 12- and 13- year-old individuals seeking orthodontic treatment"  
Master's Thesis, Case Western Reserve University. 2009

John Ballrick, D.D.S., M.S.D.  
"Image Distortion and Spatial Resolution of a Commercially Available CBCT"  
Master's Thesis, Case Western Reserve University. 2009

- Eric Hughes, D.M.D., M.S.D.  
“The Study of the Most Common Retention Protocols and Appliances Among Orthodontists in the United States” Master’s Thesis, Case Western Reserve University. 2009
- Boyd Martin, D.M.D., M.S.D.  
“Three Dimensional Analysis of Root Surface Area Using CBCT” Master’s Thesis, Case Western Reserve University. 2009
- Alika Crew, D.D.S., M.S.D.  
“A Study of Orthodontic Stability Followed by Removal of Final Wires.” Master’s thesis, Case Western Reserve University 2008
- Jeffrey Kwong, D.D.S., M.S.D.  
“Image Quality Produced by Different Cone Beam Computer Tomography Settings” Master’s thesis, Case Western Reserve University 2008
- Nadia Lyotard, D.D.S., M.S.D.  
“A Prospective Clinical Trial on Short-term Stability Without Retention.” Master’s thesis, Case Western Reserve University 2007
- Gabrielle Chan, D.D.S., M.S.D.  
“A Comparison of Linear and Angular Measurement From Cone Beam Computed Tomography and Cephalograms. Master’s thesis, Case Western Reserve University 2007
- Jed Hildebrand, D.D.S., M.S.D.  
“Evaluation of Digital and Plaster Models Using the ABO Scoring Index” Master’s thesis, Case Western Reserve University 2006
- Clifford Lowdenback, D.M.D., M.S.D.  
“Predicting Orthodontic Treatment Duration Using Pre-Treatment Patient Variables” Master’s Thesis, Case Western Reserve University 2006
- Tasha Woodson Bolden, D.M.D., M.S.D.  
“African-American Orthodontists: How they are Choosing to Practice Orthodontics.” Master’s Thesis, Case Western Reserve University 2007
- Justin Pagan, D.D.S., M.S.D.  
“Evaluation of Cephalometric Changes in Class III Versus Class II Individuals’ Master’s Thesis, Case Western Reserve 2005
- \*Mohammad R. Razavi, D.D.S., M.S.D.**  
“Tooth-size discrepancies and agenesis of teeth: A familial study.” Master’s Thesis, Case Western Reserve University. 2005



- Victoria M. Wan, D.D.S., M.S.D.  
A comparative cephalometric study of the twin block and bionator appliances in the treatment of Class II malocclusion” Master’s Thesis, Case Western Reserve University. 2005
- Sean P. Bates, D.D.S., M.S.D.  
“Non-destructive Determination of the Correlation of Skull Radiodensity to Stiffness and Strength in a Fresh-Frozen Cadaver.” Master’s Thesis, Case Western Reserve University. 2004
- Lance Q. Bruntz, D.M.D., M.S.D.  
“A Comparison of Scanned Lateral Cephalograms to Corresponding Original Radiographs.” Master’s Thesis, Case Western Reserve University. 2004
- Christopher Spoonhower, D.D.S., M.S.D.  
“Familial Aggregation of Congenital Hypodontia” Master’s Thesis, Case Western Reserve University. 2004
- Laurence Golden, D.D.S., M.S.D.  
“Generation of Recombinant Human  $\beta$ -Defensin-3 and its Microbicidal Activity Against Oral Bacteria.” Master’s Thesis, Case Western Reserve University 2003
- Gordon Groisser, D.D.S., M.S.D.  
“The Effect of Orthodontic Treatment With All Four First Molar Extractions on the Vertical Dimension of Occlusion.” Master’s Thesis, Case Western Reserve University 2003
- Mandana Mozayeni-Azar, D.D.S., M.S.D.  
“Post Treatment Evaluation of Protraction Face Mask Therapy Using Traditional Cephalometrics and Procrustes Analysis” Master’s Thesis, Case Western Reserve University 2003
- \*Yumi Abei, D.D.S., M.S.D.**  
Outcome Assessment of Orthodontic Treatment Provided by Orthodontic Specialists and Non-Orthodontists.” Master’s Thesis, Case Western Reserve University. 2002
- Jedidiah Gass, D.D.S., M.S.D.  
“Heritability of Maxillary Midline Diastema” Master’s Thesis, Case Western Reserve University. 2001
- Donald W. Hunt, Jr., D.M.D., M.S.D.  
“Three-dimensional analysis of size and shape changes through growth in Class II, Div. 1 individuals” Master’s Thesis, Case Western Reserve University. 2001

- Sally S. Park, D.D.S., M.S.D.  
“The Use of Practice Management Software Programs in Epidemiological Research.” Master’s Thesis, Case Western Reserve University. 2001
- Jonathan Eckhardt, D.D.S., M.S.D.  
“Characterization of Orthodontic Services Provided by General Dentists in Ohio.” Master’s Thesis, Case Western Reserve University. 1999
- \*Roland Feghali, D.D.S., M.S.D.**  
“Comparing Intraoral Clinical Observation with Study Model Assessment of Occlusion Using the P.A.R. Index.” Master’s Thesis, Case Western Reserve University. 1999
- Randall Kulnis, D.M.D., M.S.D.  
“Cephalometric assessment of snoring and non-snoring children” Master’s Thesis, Case Western Reserve University. 1998
- \*Ryan Wenger, D.D.S., M.S.D.**  
“Evaluation of protraction facemask therapy using Procrustes analysis and traditional cephalometrics.” Master’s Thesis, Case Western Reserve University. 1998
- Jamie Signorino, D.D.S., M.S.D.  
The Use of Antisialogogues in Orthodontic Bonding Procedures.” Master’s Thesis, Case Western Reserve University. 1999
- \*Krishnamoorthy Subramanyan,**  
“Craniofacial Surgical Planning with Post-Operative Follow-Up.” Ph.D. Dissertation Case Western Reserve University 1999
- \*J. Martin Palomo, D.D.S., M.S.D.**  
“A Three Dimensional Study of the Craniofacial Growth and Development of 16 Female Bolton Faces.” Master’s Thesis, Case Western Reserve University. 1997
- Hsin-Hsin Wu, D.D.S., M.S.D.  
“The Effects of Rapid Maxillary Expansion on Arch Asymmetry in Children.” Master’s Thesis, Case Western Reserve University. 1997
- \*Sharon Schmahl, D.D.S., M.S.D.**  
“A long-term evaluation of occlusal stability following orthognathic surgery.” Master’s Thesis, Case Western Reserve University. 1996
- Bassam Shaheen, D.D.S., M.S.D.  
“Analysis of Craniofacial Extracellular Matrix Proteins Derived from the Rat Nasal Septum, Mandibular Condylar, and Sphenosynchondrosal Cartilages.” Master’s Thesis, Case Western Reserve University. 1996

- Wade Najem, D.D.S., M.S.D.  
“Heritability and the Detection of Pleiotropy in the Phenotypic Expression of the Cranial Base, Maxilla and Mandible.” Master’s Thesis, Case Western Reserve University. 1996
- John Bozek, D.D.S., M.S.D.  
“Validation of a Cephalometric Index for Orthodontic Treatment Need.” Master’s Thesis, Case Western Reserve University. 1996
- David Harmon, Jr., D.D.S., M.S.D.  
“Effects of Ultrasonic Toothbrush on Orthodontic Patients Aged 11 through 17.” Master’s Thesis, Case Western Reserve University. 1996
- Brenda Brightman, D.D.S., M.S.D.  
“Recognition of Malocclusion: An Education Outcomes Assessment.” Master’s Thesis, Case Western Reserve University. 1995
- Seema Dhingra, D.D.S., M.S.D.  
“Assessment of Orthodontic Treatment Need Using a Cephalometric Index.” Master’s Thesis, Case Western Reserve University. 1995
- David Cain, D.D.S., M.S.D.  
“Histologic Analysis of Rebound Growth in the in the Rat Maxillary Alveolar Complex.” Master’s Thesis, Case Western Reserve University. 1994
- Timothy Pence, D.D.S., M.S.D.  
“The Effects of Anti-Link Protein on Rat Midfacial Growth.” Master’s Thesis, Case Western Reserve University. 1994
- \*Lisa Alvetro-Rossman, D.D.S., M.S.D.**  
“The Immediate and Long-term Effects of Maxillary Expansion of the Dentofacial Complex.” Master’s Thesis, Case Western Reserve University. 1993
- Frances Hamman, D.D.S., M.S.D.  
“Longitudinal Study of the Mature Human Dentition.” Master’s Thesis, Case Western Reserve University. 1993
- Gus Spillas, D.D.S., M.S.D.  
“Application of Factor Analysis to Cephalometric Technique.” Master’s Thesis, Case Western Reserve University. 1993
- Mark Price, D.D.S., M.S.D.  
“Dental Development in Low-Birth Weight Infants.” Master’s Thesis, Case Western Reserve University. 1992

- Angeliki Tamiolaki, D.D.S., M.S.D.  
“Teenage Patient Cooperation in the Private Orthodontic Practice Utilizing Videotape Instruction.” Master’s Thesis, Case Western Reserve University. 1992
- Carl P. Dietrich III, D.D.S., M.S.D.  
“Vertical correction of Open Bite Malocclusions.” Master’s Thesis, Case Western Reserve University. 1992
- Douglas F. Wright, D.D.S., M.S.D.  
“Laser Etching of Enamel Surfaces, Bond Strength and SEM Evaluation.” Master’s Thesis, Case Western Reserve University. 1992
- Wulfran Moron, D.D.S., M.S.D.  
“Clinical evaluation of esthetic arch wires.” Master’s Thesis, Case Western Reserve University. 1991
- Michael M. Taylor, D.D.S., M.S.D.  
“Development of lateral cephalometric standards for the pharyngeal soft tissues and related structures.” Master’s Thesis, Case Western Reserve University. 1991
- Chen-When Tseng, D.D.S., M.S.D.  
“An assessment of the relationships among dietary consistency, bite force and palatal morphology in growing monkeys.” Master’s Thesis, Case Western Reserve University. 1991
- Martin C. Writer, D.D.S., M.S.D.  
Esthetics and orthodontics: “The fabrication and testing of a synthetic esthetic orthodontic archwire.” Master’s Thesis, Case Western Reserve University. 1991
- Matthew Johnson, D.D.S., M.S.D.  
“Esthetic orthodontic arch wires: A quest for materials and a pre-clinical mechanical properties testing protocol.” Master’s Thesis, Case Western Reserve University. 1990
- Valerie D. Martone, D.M.D., M.S.D.  
“A morphometric study of the Class III pattern related to head form.” Master’s Thesis, Case Western Reserve University. 1990
- George A. Souris, D.D.S., M.S.D.  
“Third molar eruption prediction.” Master’s Thesis, Case Western Reserve University. Master’s Thesis, Case Western Reserve University. 1990
- José Chaques-Asensi, M.D., D.D.S., M.S.D.  
“Effects of surgical periostomy in animals undergoing experimental mandibular protrusion.” Master’s Thesis, Case Western Reserve University. 1990

Research Fellows Supervised

Mei Zhong, D.D.S., China Three-dimensional craniofacial imaging	2007-2008
Mohammad Tareen, D.D.S., Pakistan/Canada The use of cone beam computed tomography in orthodontics	2006-2007
Reid Wenger, D.D.S., U.S.A. – with Dr. Charles Malemud on pressure induced chondrogenesis of the human mandibular condyle	2003-2004
Young-Jin Jeon, D.D.S., Korea – mapping chromosomes involved craniofacial form – mouse model with Dr. Joseph Nadeau	2003-2004
Rubina Saheen, D.D.S., U.S.A - Rat craniofacial genetics	2001-2002
Xing-Zhong “John” Zhang, D.D.S., China – Craniofacial form and O.S.A.S.	2000-2001
Crystiane Couto, Brazil –Online Orthodontic Record Keeping	2000-2001
Dima F. Kalakech, D.D.S., Lebanon Genetic studies of Craniofacial variation.	1999-2000
Banu Cakirer, D.D.S., M.S.D., Turkey Three-dimensional imaging in clinical orthodontics.	1998-2000
Yumi Abei, D.D.S., Japan Postdoctoral Fellow, Assessing treatment need in 10 <sup>th</sup> grade students in Cuyahoga County, Ohio.	1997-1999
Young Ho Cha, D.D.S., Korea Postdoctoral Fellow, Korean Training Program, CWRU, 3-Dimensional cephalometrics of Class II malocclusion and the genetic determinants of rat craniofacial form.	1997-1999
Alexandros I. Moullas, D.D.S., Greece Postdoctoral Research Fellow CWRU. Interdisciplinary research project on 3-dimensional cephalometrics of Class II malocclusion.	1997-1998
Soon-Jung Park, D.D.S., Korea Postdoctoral Fellow, Korean Fellowship Program, CWRU, Genetic Determination of Craniofacial Shape and Form; Korean Standards; Study Models; Digital Storage; Rat Cephalometrics	1996-1997
August Gasparetto, D.D.S., Brazil Visiting Scholar, Case Western Reserve University Department of Orthodontics Storage and Retrieval of Cephalometric Radiographs on Computer; HTML	1996-1997

Manish Valiathan, B.D.S., M.D.S., U.S.A. Visiting Assistant Professor, Case Western Reserve University, Department of Orthodontics. Health Services Research/Outcomes Assessment/PAR Index.	1996-1997
Jae-Hak Lee, D.D.S., Korea Visiting Scholar Case Western Reserve University, Department of Orthodontics. Research in Obstructive Sleep Apnea Syndrome. Validation of Identification of Landmarks Data from Digital Cephalometric Radiographs	1994-1996
Eun Kyung Kim, D.D.S., Ph.D., Korea Visiting Scholar, Case Western Reserve University, Department of Orthodontics Validation of Digital Technology to Enhance Radiographs.	1995-1996
Jeong Won Kim, D.D.S., Korea Research Associate, Bolton-Brush Growth Study Center, Case Western Reserve University. Research on the use of electrodes to stimulate the muscles of mastication.	1994-1995
Virginia Luks, D.D.S., Canada Lesley Newton Fellow Department of Orthodontics, Case Western Reserve University Craniofacial Anatomy of Subjects with Obstructive Sleep Apnea.	1994-1995
Seung-Jin Baek, D.D.S., M.S.D., Ph.D., Korea Lesley Newton Fellow Department of Orthodontics Visiting Scholar, Case Western Reserve University Craniofacial Anatomy of Subjects with Obstructive Sleep Apnea.	1993-1994
Andrea Bazzucchi, D.D.S., Italy Visiting Scholar Case Western Reserve University. Use of Electrodes to Stimulate the Muscles of Mastication	1993-1994
Hui-Ling Chen, D.D.S., Taiwan Visiting Scholar Case Western Reserve University. Grayscale Resolution of Cephalometric Radiographs”	1993-1994
Suchitra S. Nelson, Ph.D., M.S., U.S.A. The Systematic Recall of the Bolton-Brush Growth Study Population	1992, 1993
Mark Zammit, D.B.S, Canada Lesley Newton Research Fellow, Department of Orthodontics, Case Western Reserve University	1992-1993

Konstantinos I. Tsolakis, D.D.S., Greece Lesley Newton Research Fellow, Department of Orthodontics, Case Western Reserve University. "Experimental Restriction of Transverse Maxillary Growth of the Rat."	1991-1992
Nonglak Prachartam, D.D.S., Thailand "Craniofacial Evaluation and Effect of a Modified Functional Appliance in Obstructive Sleep Apnea Syndrome: A Pilot Study"	1991
Regine Noachtar, Germany "An Evaluation of Vertical Changes in Response to Orthodontic Treatment with the Bionator Appliance"	1991
Bassam Shaheen, D.D.S., Syria "Characterization and Isolation of Unique Antigenic Determinants in Nasal Septum and Condylar Cartilage"	1991

Teaching Responsibilities:

**Master of Science in Dentistry Program (MSD Degree)**

Developed seminar series on multidisciplinary management of complex craniofacial conditions	1997
Developed a seminar series to teach graduate students diagnosis and treatment of patients with masticatory dysfunction secondary to internal derangement of the temporomandibular joints and/or dental malocclusion.	
Director Craniofacial Anomalies Clinic - Treating patients with deformities of the face and associated oral structures.	1990-present
Supervise diagnosis and treatment planning of patients with TMJ dysfunction in the Department of Orthodontics, C.W.R.U.	1990-1992
Course Director DENT #504 (2) ADVANCED FACIAL GROWTH (PROBLEMS IN GROWTH, DEVELOPMENT AND AGING)	1989-Present
This course is a student-participation, seminar evaluation series dealing with the problems and controversies apparent in the literature in regard to the theories of growth, development, and aging. Emphasis is given to the craniofacial literature, but not exclusively. This course meets weekly during one term.	

Course Director DENT #583 (1) 1989-Present

#### ORTHODONTIC DIAGNOSIS SEMINARS I

First in a series of three courses. Weekly lectures and seminars covering the science of orthodontic diagnosis. The initial first term consists of lectures on the techniques of diagnosis, various diagnostic aids, and case planning. The second term consists of seminars where the students perform diagnoses, plan treatment and critique cases from the departmental records so that, upon graduation, the student will have diagnosed and evaluated treatment on some 600 cases.

Course Director DENT #584 (1) 1989-Present

#### ORTHODONTIC DIAGNOSIS SEMINARS II

Second in a series of three courses.

Course Director DENT #585 (1) 1989-Present

#### ORTHODONTIC DIAGNOSIS SEMINARS III

Third in a series of three courses.

Course Director DENT #523 (2) 1989-1996

#### CLINICAL SPECIALTY SEMINARS

This course is a companion to the clinical training in orthodontics and involves faculty and student evaluation of past and present literature. This course consists of four one-hour meetings each week throughout the entire four semesters of instruction. Sessions are used to evaluate current timely literature, and lectures and seminars complement the clinical experience with topics including patient management, treatment of various aged patients, treatment of various types of malocclusions, orthopedic appliances, special patient treatment (habits, cleft palate, mental retardation, etc.) and various aspects of fixed and removable mechanotherapy. The students are also exposed to the history of orthodontics, additional treatment philosophies through guest speakers, and new developments in treatment. Clinic problem cases, thesis cases, and the cases closed out during the year by the graduating students in conjunction with the instructor who supervised the case are also discussed.

DENT #573 (2) ADVANCED SPECIALTY PRINCIPLES (Clinic First Year)

DENT #574 (2) ADVANCED SPECIALTY PRINCIPLES (Clinic Second Year) 1993-1996

The course consists of supervised clinical instruction. Emphasis is placed on the techniques of record gathering, diagnosis, case planning, treatment, retention, and periodic review of progress of all the cases accepted for treatment. This is accomplished by extensive supervised clinical practice.

At the start of the second year, an examination of case progress is given. The second year caseload is also supplemented with transfer cases from the graduating students. This course is designed to prepare the student to be proficient upon graduation in clinical orthodontic treatment procedures. A limited number of techniques (or "philosophies") are taught so as not to dilute the clinical experience. Between 30 and 35 cases are assigned to each student for treatment under supervision by the individual instructors. An examination (Clinic Comprehensive Examination) is given during the final semester and is designed to prepare the student for board examinations. All thesis cases are evaluated. All thesis cases and all debanded cases are displayed at graduation.



Course Director DENT #651 1989-Present

**THESIS (M.S.D.) (Credit as Arranged)**

The period necessary to conduct an original research project pertinent to the fields of craniofacial biology and orthodontics. The final preparation of the thesis and oral defense is conducted during this course, and the final, corrected draft of the thesis is turned in to the Department. This course may be elected after the fourth semester of the program if necessary.

Course Director DENT #682 (2) 1989-2006

**CLINICAL CEPHALOMETRICS**

This is a course directed at a thorough understanding of the craniofacial radiographic techniques with emphasis on historical as well as contemporary uses of cephalometric roentgenography. This course is designed to introduce the resident to the clinical use of cephalometrics for orthodontic diagnosis and treatment planning. The course will acquaint the resident with the use of X-rays and radiation hygiene and stress technical and interpretative proficiency in the use of diagnostic procedures. This course is given during the first term and includes both lecture and laboratory instruction.

Course Director DENT 683 (2) 1989-1995

**ADVANCED CEPHALOMETRICS**

This course is designed to extend study of the cephalometric technique and includes its use in the assessment and prediction of growth, the effects of treatment, the limitations of the technique, and its value as a research tool. This course is given during the second term and includes both lecture and laboratory sessions.

**Professional Program (D.D.S. degree)**

Course Director DEND 182 Facial Growth and Development \*\*

\*\* Course number changed to HEWB123

1991-Present

Description: Introduction to the normal and abnormal growth and development of the human face.

Course Director DEND 482 Clinical Orthodontics

1994-1997

Description: Clinical application of the principles of orthodontics

**CWRU University Undergraduate Seminars**

Course Director USSO 209 "Face First"

Fall '09

Within the SAGES Program (Seminar Approach to  
General Education and Scholarship)

Instructor USSY 246 "How to Make a Leader"

Spring '09

(Dean Jerold Goldberg, Course Director)

Within the SAGES Program (Seminar Approach to  
General Education and Scholarship)

Course Director USSO 209 “Face First” Within the SAGES Program (Seminar Approach to General Education and Scholarship)	Fall ‘08
Instructor USSY 246 “How to Make a Leader” (Dean Jerold Goldberg, Course Director) Within the SAGES Program (Seminar Approach to General Education and Scholarship)	Spring ‘08
Course Director USSO 209 “Face First” Within the SAGES Program (Seminar Approach to General Education and Scholarship)	Fall ‘07
Instructor USSY 246 “How to Make a Leader” (Dean Jerold Goldberg, Course Director) Within the SAGES Program (Seminar Approach to General Education and Scholarship)	Spring ‘07
Course Director USSO 209 “Face First” Within the SAGES Program (Seminar Approach to General Education and Scholarship)	Fall ‘06
Course Director “Life of the Mind” Within the SAGES Program (Seminar Approach to General Education and Scholarship)	Fall ‘05
Course Director USSO 209 “Face First” Description: “Thinking about the Social World” Within the SAGES Program (Seminar Approach to General Education and Scholarship)	Fall ’03 & ‘04

The “Face First” course demonstrates to students how life science information (i.e., anatomic facial differences) impacts their social and symbolic worlds. The objective of the course is to challenge students to think critically about facial appearance, beauty and acceptance in society. Students will be able to draw on experiences in their own lives as well as the lives of others. Students will be given opportunities to explore interactions among biologic facts and societal values.