

Divakar Karanth BDS, MDS, M. Orth RCS, MS.

Clinical Associate Professor, University of Florida College of Dentistry, Gainesville, FL.
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Education

Master of Sciences & Certificate in Orthodontics University of Kentucky College of Dentistry, Lexington, KY.	2017 – 2020
Advanced Continuing Education in Craniofacial Biology University of Kentucky College of Dentistry, Lexington, KY.	2016 - 2017
M. Orth R.C.S (Ed) Royal College of Surgeons, Edinburgh, United Kingdom.	1996
Master of Dental Surgery in Orthodontics SDM College of Dental Sciences and Hospital, Karnatak University, India.	1992 – 1995
Bachelor of Dental Surgery SDM College of Dental Sciences and Hospital, Karnatak University, India.	1987-1992

Board certification

American Board of Orthodontics- Board Certification	2021
ADEX Dental Examination – CDCA	2020
National Board Dental Examination (NBDE) Part II	2019
National Board Dental Examination (NBDE) Part I	2016

Licenses

Commonwealth of Virginia Board of Dentistry: Dental License # 0401417102	2020
Florida State Board of Dentistry Teaching Permit # 715	2020

Work Experience

Program Director, Graduate Orthodontics University of Florida College of Dentistry	Gainesville, FL Oct 2021 - Present
Clinical Associate Professor of Orthodontics University of Florida College of Dentistry	Gainesville, FL Aug 2020 - Present
Teaching Assistant (Predoctoral Orthodontics) University of Kentucky College of Dentistry	Lexington, KY Aug 2018 –May 2020
Consultant Orthodontist, Head of Dental Department Al-Esraa Medical Center, Doha Healthcare	Doha, Qatar June 2014 - Sept. 2015
Specialist Orthodontist Al-Esraa Medical Center, Doha Healthcare	Doha, Qatar July 2012 – June.2014
Associate Professor University of Benghazi	Benghazi, Libya Oct. 2009–Oct.2011
Professor & Department Chief M. Ms. N.G.H Institute of Dental Sciences and Research Center	Belgaum, India July. 2007–Oct.2009

Professor Bapuji Dental College & Hospital	Davangere, India Oct. 2004–Mar.2007
Associate Professor Bapuji Dental College & Hospital	Davangere, India Apr. 2000–Sept.2004
Lecturer School of Dentistry at the University of West Indies	Trinidad & Tobago Oct 1998 - Oct 1999
Assistant Professor College of Dental Surgery, Manipal Academy of Higher Education	Mangalore, India Oct. 1996–Oct. 1998
Clinical Attachment Royal Bournemouth Hospital	Dorset, United Kingdom Sept. 1996–Oct.1996
Assistant Professor SDM College of Dental Sciences and Hospital	Dharwad, India Apr. 1995 –Aug.1996

Orthodontic Private Practice Experience

Orthodontic Faculty Practice , University of Florida, Gainesville, Florida	Aug 2020 - Present
Orthodontic Private Practice , Gainesville Dental Arts, Gainesville, Virginia	Aug 2020 - Present
Orthodontic Consultant , Doha Healthcare, a multi-specialty hospital, Doha, Qatar	July 2012 – Sept 2015
Director and Consultant Orthodontist , Smile ‘N’ Braces, Dental & Orthodontic Clinic, Goa, India.	Dec 1999 - Oct. 2009

Teaching Profile

Orthodontic Treatment – Part 4 Class II Treatment	[DEN 6605]	Course Director	UF College of Dentistry	Spring 2023
Orthodontic Treatment – Part 3 Class II Treatment	[DEN 6604]	Course Director	UF College of Dentistry	Fall 2022
Orthodontics for Pediatric Dentists		Course Director	UF College of Dentistry	June 2021- Present
Core Course for Orthodontic Residents	[DEN 6905]		UF College of Dentistry	July 2021- Present
Clinical Orthodontics	[DEN 7819L]		UF College of Dentistry	July 2021- Present
Clinical Training of Residents [DEN8601L]			UF College of Dentistry	Aug 2020 – Present
Developmental Biology and Psychosocial Issues [DEN 5210]			UF College of Dentistry	July 2021- Present
Grand Rounds	[DEN 6942]		UF College of Dentistry	Spring 2022- Present
Orthodontic Treatment – Part 2 Earl orthodontic Tx, extractions, finishing, and retention.	[DEN 6603]	Course Director	UF College of Dentistry	Spring 2022
Orthodontic Treatment – Part 1 Impactions, Transplantation & Multidisciplinary treatment	[DEN 6602]	Course Director	UF College of Dentistry	Fall 2021
Orthodontic Treatment – Part 6 Orthodontic Systems: Self-ligating bracket systems, MBT technique, Clear Aligners, Tweed technique, Bioprogressive Therapy,	[DEN 6607]	Course Director	UF College of Dentistry	Spring 2021
Supervised Teaching- Residents	[DEN 6940]	Course Director	UF College of Dentistry	Aug 2020 – Aug 2021
Predoc Orthodontic Elective Clinical Course	[DEN 8290]	Course Director	UF College of Dentistry	Aug 2020 – June 2021
Postnatal Growth and Development	[DEN 6618]		UF College of Dentistry	2021
Orthodontics for the General Practitioner	[DEN 7450]	Course Director	UF College of Dentistry	May 2021-Aug 2021

Orthodontic Treatment – Part 5 Open Bite, Class III & Crossbite Treatments	[DEN 6606]	Course Director	UF College of Dentistry	Fall 2020
Predoctoral Orthodontics	[ORT 822]		UK College of Dentistry	Aug 2018 –May 2020
Predoctoral Clinical Orthodontics	[ORT 841]		UK College of Dentistry	Aug 2018 –May 2020
Predoctoral Orthodontic Elective	[ORT 850]		UK College of Dentistry	Aug 2018 –May 2020

Research Mentoring Activities

Research Committee Member – Master of Sciences Thesis, UF – Hilury Ha, Orthodontic Resident. Evaluation of Outcomes of Periodontally Accelerated Osteogenic Orthodontics in the Mandibular Anterior Region Using CBCT	2021-24
Research Committee Chair – Master of Sciences Thesis, UF – Samatha Montoya, Orthodontic Resident. Artificial Intelligence to detect External Apical Root Resorption	2021-24
Research Committee Member – Master of Sciences Thesis, UF – Chantol Peterkin, Orthodontic Resident. A comparison of non-surgical techniques for closing anterior open bites: multiloop edgewise archwire technique vs. extraction of 4 premolars	2020-23
Research Committee Chair – Master of Sciences Thesis, UF - David Jensen, Orthodontic Resident. The effect of mandibular advancement on airway space dimensions in Sleep Apnea patients studied using the Cone-Beam computed tomography analysis	2020-23
Research Committee Member – Master of Sciences Thesis, UF – Undine Davis, Orthodontic Resident. Accelerated wear protocol for mandibular incisors alignment using clear aligners and regenerative corticotomies: Three case reports	2020-23
Pre-Dental Research Mentoring – University of Florida. Mentoring Ruben Botello-Escalante, Pre-Dental student Segmentation of 3 Dimensional images from Cone-Beam computed tomography	2020-21
DMD Research Mentor Program – University of Florida. Mentoring Cameron M Kocan, DMD student Cone-Beam computed tomography selection for research on Artificial Intelligence to detect External Apical Root Resorption	2020-21
DMD Student Research Mentoring - University of Florida. Irimia, Marco, DMD student, Efficacy of cell-carrying PCL/PLGA/HAp scaffold for bone tissue engineering by loading different growth factors Bone regeneration scaffold.	2020-21
Intern Research Mentoring - University of Florida. Adzenyah, Akosua, Intern, Orthodontics, Bioprinting three-dimensional scaffold for bone regeneration	2020-21
Research Committee Chair - Master of Sciences in Orthodontics, RG Health University. Raj Kumar Gaddam Incidence of tooth size discrepancy in different groups of malocclusions and its relation to extraction: A Model Study.	2003-2006
Research Committee Chair - Master of Sciences in Orthodontics, RG Health University. Hari Krishna Kankipati Comparison of soft tissue changes, anchorage loss, torque requirement following space closure with MBT and ROTH prescription in skeletal bi-maxillary protrusion cases. A cephalometric study.	2003-2006
Research Committee Chair - Master of Sciences in Orthodontics, RG Health University. Nagadeepak Sutrave. Calibration of force-extension and force degradation characteristics of orthodontic latex elastics.	2002-2005
Research Committee Chair - Master of Sciences in Orthodontics, RG Health University. Jayini Rajashekar Genioplasty: A retrospective cephalometric analysis of osseous and soft tissue changes.	2000-2003

Honors & Awards

AAOF-supported Faculty Career Enrichments (FaCE of Orthodontics) Scholarship- 2022	2022
Institute of Physics (IOP) Trusted Reviewer Award Recognition as the very best peer reviewer in the physical sciences- Biomaterials articles	2020
SAO Research Presentation Award- First Place Southern Association of Orthodontists Meeting, Oct 2020	2020
International Student Scholarship- 2019-2020 Academic Year. International Student and Scholar Services (ISSS) University of Kentucky.	2019-20
Charley Schultz Research Scholar Award – 3rd Place in Research Category Developing and evaluating piezoelectric scaffold for alveolar bone regeneration at AAO 2019, LA	2019
Best Research award Developing and evaluating the piezoelectric scaffold for alveolar bone regeneration. CCTS Spring Conference & UKCD Research day, University of Kentucky.	2019
3 Minute Thesis- Finalist The University of Kentucky.	2018
Best Research Award Accelerated orthodontic tooth movement CCTS Spring Conference & UKCD Research day, University of Kentucky.	2018
Second Best Clinical Paper Award Iatrogenic Malocclusion, 43 rd Indian Orthodontic Conference at Mumbai.	2009
Second Best Scientific Paper Award Controlled Canine retraction in sectional arch technique, A comparison of T loop and PG retraction spring, 33 rd Indian Orthodontic Conference at Manipal.	1998
Second Best Scientific Paper Award Effectiveness of different intrusive arches-A comparative study, 32 nd Indian Orthodontic Conference at Goa.	1997
	1995

Grants

Electron Microscopy Pilot Projects grant. (PI) Kentucky Biomedical Research Infrastructure Network and IdeA Networks of Biomedical Research Excellence	2020
National Nanotechnology Coordinated Infrastructure (NNCI) (PI) Supported by The National Science Foundation (NSF).	2019
National Institute of Health, CCTS, Pilot Grant #3210001123 Co-Investigator Developing and evaluating piezoelectric scaffold for alveolar bone regeneration	2018
Southern Association of Orthodontists Graduate Research Award. (PI) Developing and evaluating piezoelectric scaffold for alveolar bone regeneration	2018
Southern Association of Orthodontists Graduate Research Award. Evaluation of Outcomes of Periodontally Accelerated Osteogenic Orthodontics in the Mandibular Anterior Region Using CBCT Ha H, Gonzaga L, Dr. Gohel A. Karanth D , Dolce C.	2022
Southern Association of Orthodontists Graduate Research Award. 3D printing of bone scaffolds using collagen matrix and their osteogenic potential Irsheid R, Holliday L, Huang Y, Karanth D .	2022
Southern Association of Orthodontists Graduate Research Award. Machine Learning Model to Assess The External Apical Root Resorption From The CBCT Image Montoya S, Holliday S, Rocha M, Gohel A, Dolce C, Karanth D .	2022

Presentations

Digital Technology in Orthodontics

Invited Speaker, EC course

Bangalore Orthodontic Study Group Meeting

Bangalore, India, Dec. 2022

3D Printed Biodegradable Scaffold for Craniofacial Bone Regeneration

Invited speaker, "Harnessing Technology and Biomedicine for Precision Orthodontics."

D. Karanth, L. Sharab, D. Dawson, D. Puleo, Y. Huang, K. Song, B. Ren, L. Gower, C. Dolce, S. Holliday

9th Biennial Meeting, The Consortium for Orthodontic Advances in Science and Technology (COAST)

Lake Arrowhead, CA, Nov 2022

Machine Learning Model to Assess The External Apical Root Resorption From The CBCT Image

Poster Presentation, "Harnessing Technology and Biomedicine for Precision Orthodontics."

D. Karanth, S. Montoya, S. Abu Arqub, S. Holliday, M. Rocha, A. Gohel, C. Dolce

9th Biennial Meeting, The Consortium for Orthodontic Advances in Science and Technology (COAST)

Lake Arrowhead, CA, Nov 2022

3D-printed Scaffold for Craniofacial Bone Regeneration

Invited speaker,

2022 W. Eugene Roberts Educational Leadership Conference

Miami, May 2022

Management of Class II Malocclusion

Invited Presentation- Webinar

SDM College of Dental Sciences & Hospital, India

Jan 2022

Bone Regeneration using 3D printed Resorbable Scaffold

Oral Presentation

D. Karanth, L. Sharab, D.R. Dawson, H.W. Roberts, D.A. Puleo

Southern Association of Orthodontists Meeting

Oct 2020

3D printed biodegradable piezoelectric scaffold for bone regeneration.

E- Poster presentation

D. Karanth, L. Sharab, D.R. Dawson, H.W. Roberts, D.A. Puleo

IADR/ AADR

Washington DC, March 2020

Developing and evaluating 3D printed biodegradable piezoelectric scaffold for bone regeneration.

E- Poster presentation:

https://files.aievolution.com/prd/ao2001/abstracts/5364/1525_KARANTH.pdf

D. Karanth, L. Sharab, D.R. Dawson, H.W. Roberts, D.A. Puleo

American Association of Orthodontists Virtual Meeting

May 2020

Current Methods of Class II Treatment

D. Karanth- Invited Oral presentation

Michigan University

April 2020

Current Methods of Class II Treatment

D. Karanth- Invited Oral presentation

University of Florida

April 2020

3D Printed Resorbable Scaffold for Bone Regeneration

D. Karanth- Invited Oral presentation

University Missouri at Kansas City

Feb, 2020

3D Printed Resorbable Scaffold for Bone Regeneration

D. Karanth- Invited Oral presentation

Indiana University

Feb, 2020

3D Printed PLLA Scaffold for Bone Regeneration

Poster presentation

D. Karanth, L. Sharab, D.R. Dawson, H.W. Roberts, D.A. Puleo

The 47th Annual Moyers Symposium

Feb 2020

Developing and evaluating the piezoelectric scaffold for alveolar bone regeneration.

Poster for Charley Schultz Research scholar award - 3rd Place in Research category.

D. Karanth, L. Sharab, D.R. Dawson, H.W. Roberts, D.A. Puleo

American Association of Orthodontists Annual meeting

Los Angeles, CA. 2019

The piezoelectric scaffold for alveolar bone regeneration.

Poster presentation

D. Karanth, L. Sharab, D.R. Dawson, H.W. Roberts, D.A. Puleo

CCTS Spring Conference and UKCD Research Day

University of Kentucky, April 2019

Accelerated orthodontic tooth movement.

Poster presentation

D. Karanth, C. Loss, J. Jacob, L. Sharab

CCTS Spring Conference and UKCD Research Day

University of Kentucky, April 2018

Relationships between Moderate to Severe External Apical Root Resorption concurrent with Orthodontic Treatment and Patient-Reported Allergy and/or Asthma

[Poster presentation](#)

D. Karanth, L. A. Morford, J. Dempsey, M. Moremi, A. Abouelnour, G. Falcao-Alencar, G. T. Kluemper, J. V. Macri, J. K. Hartsfield, Jr.

Skeletal Anchorage in a Rat Model of Orthodontic Tooth Movement.

S. Gudhimella, A. Ibrahim, A. Kluemper, [D. Karanth](#), P. Westgate, S.S. Huja

[Poster Presentation for Charley Schultz Research scholar award – 2nd Place](#)

Rate of Tooth Movement in Rats Under Low Orthodontic Force

A. Kluemper, S. Gudhimella, A. Ibrahim, [D. Karanth](#), S. Pandravad, P. Westgate, D. Puleo,

S.S. Huja [Poster presentation – 2nd place- Research award](#)

Skeletal Anchorage in a Rat Model of Orthodontic Tooth Movement

S. Gudhimella, A. Ibrahim, [D. Karanth](#), S. Pandravad, S.S. Huja

[Poster presentation](#)

Rate of Orthodontic Tooth Movement (OTM) in a Rodent Model Using Light Forces

Ibrahim, S Gudhimella, [D. Karanth](#), A. Kluemper, S. Pandravad, P. Westgate, D. Puleo, S.S.

Huja

[Poster presentation](#)

Orthodontic Tooth Movement in Rats Using Low Force and Skeletal Anchorage

A. Kluemper, S. Gudhimella, A. Ibrahim, [D. Karanth](#), S. Pandravad, P. Westgate, D. Puleo,

S.S. Huja [Poster presentation – 3rd Place – Research award](#)

Skeletal Anchorage in a Rat Model of Orthodontic Tooth Movement.

S. Gudhimella, A. Ibrahim, A. Kluemper, [D. Karanth](#), P. Westgate, S.S. Huja

[Poster presentation – Best Research award](#)

Preventive and Interceptive orthodontic procedures – Role of a Dentist.

[D. Karanth](#)

[Guest lecture](#)

Iatrogenic Malocclusion.

[D. Karanth](#) – Oral Presentation

New concepts in biomechanics.

[D Karanth](#), KS Shetty

[Guest lecture](#)

Micro-implant Anchorage.

[Karanth H.S.D](#), Shetty KS

[Guest Lecture](#)

Biomechanical and Clinical perspective of Segmental arch approach.

[Karanth H.S.D](#), Shetty KS

[Keynote Presentation](#)

Clinical implications of the Segmental arch technique.

[Karanth H.S.D](#), Shetty KS

[Guest Lecture](#)

Segmental mechanics: Research and Clinical Implications.

[Karanth H.S.D](#), Shetty KS

[Keynote Presentation](#)

Indigenous superelastic nickel-titanium T Loop retraction springs –An investigation of force characteristics.

[Karanth H.S.D](#), Shetty KS

Role of Bioelectricity in Orthodontic Tooth Movement.

[CCTS Spring Conference and UKCD Research Day](#)
University of Kentucky, April 2017

[American Association of Orthodontists Annual Session](#)
San Diego, CA. May 2017

[CCTS Spring Conference and UKCD Research Day](#)
University of Kentucky, April 2017

[IADR/AADR/CADR General Session](#)
San Francisco, CA, 2017

[IADR/AADR/CADR General Session](#)
San Francisco, CA, 2017

[Hinman Student Research Symposium.](#)
Memphis, TN. Nov. 2017

[CCTS Spring Conference and UKCD Research Day](#)
University of Kentucky, April 2017

[Scientific Day of Dental Faculty](#)
Garyounis University, Benghazi Libya, April 2010

[43rd Indian Orthodontic Conference](#)
Mumbai, Nov. 2009

[PG convention](#)
Dharwad, India. Jan. 2005

[PG Convention](#)
Mangalore, India. Jan. 2004

[38th Indian Orthodontic Conference](#)
Coimbatore, India. Sept. 2003

[Orthodontic Alumni Meeting](#)
Dharwad, India. Jan. 2002

[37th Indian Orthodontic Conference](#)
Lucknow, India. Sept. 2002

[Asian Orthodontic Congress & 36th Indian Orthodontic Conference](#)
Cochin, India. Sept. 2001

[13th Annual Conference of the](#)

Biochemical events associated with Connective Tissue Remodeling.

Karanth H.S.D, Shetty KS

International Orthodontic Congress & 35th Indian
Orthodontic Conference
Jaipur, India. Nov. 2000

Controlled Canine retraction in sectional arch technique, A comparison of T loop and PG retraction spring

Karanth HSD, Shetty VS

33rd Indian Orthodontic Conference
Manipal, India. Oct. 1998

Genetics and Malocclusion

Divakar HS, Shama P, Shetty VS

First Annual Conference of
Indian Academy of Orofacial Genetics
Manipal, India. April 1998

Effectiveness of different intrusive arches-A comparative study

Divakar HS, Shetty VS

32nd Indian Orthodontic Conference
Goa, India. Oct. 1997

Skeletal Class II correction with Twin Block

Divakar HS, Jayade VP

17th Annual Conference of Indian Society of Pedodontics
and Preventive Dentistry
Mangalore, India. Jan. 1996

Interpretation of hand and wrist radiographs in estimating skeletal maturational status

Divakar HS, Jayade VP

7th National Conference of Indian Academy of Oral
Medicine and Radiology
Dharwad, India. Dec. 1995

Finishing with rectangular wires

Divakar HS, Jayade VP

30th Indian Orthodontic Conference
Lonavala, India. Nov. 1995

Comparison of uprighting springs made from lighter Australian wires

Divakar HS, Jayade VP

28th Indian Orthodontic Conference
Hyderabad, India. Nov. 1993

Why visit a dentist: Reason for seeking dental care.

Divakar HS, Gopalakrishnan NS

21st Karnataka State and 2nd South Zone Conference
Bangalore, India. Nov. 1992

Perception of profile: Use of Jig-Saw

Divakar HS, Gopalakrishnan NS

46th Indian Dental Conference
Mangalore, India. Dec. 1991

Publications

Developing and evaluating a 3D-printed scaffold for bone regeneration using PLLA.

Karanth D, Puleo DA, Dawson D, Holliday LS, Sharab L.

Clinical and Experimental Dental Research
Under Review

Plasma Membrane Receptors Involved in the Binding and Response of Osteoclasts to Noncellular Components of the Bone

Karanth DH, Martin ML, Holliday LS

DOI: 10.3390/ijms221810097

International Journal of Molecular Sciences
22.18 (2021): 10097

A rodent model using skeletal anchorage and low forces for orthodontic tooth movement.

Gudhimella S, Ibrahim AY, Karanth D, Kluemper AM, Westgate PM, Puleo DA, Huja SS PMID: 30712697

Am J Orthod Dentofacial Orthod.
2019;155(2):254-263

Effect of Thread Design of Orthodontic Mini Implants on Their Stability – A Pilot Study

Abdelgader I, Karanth D, Bourauel C

International Journal of Science and
Engineering Investigations
2016;5: 24-28

Tooth size discrepancy in a Libyan population, a cross-sectional study in schoolchildren.

Bugaighis I, Karanth D, Borzabadi-Farahani A PMID: 25810819

J. Clin. Exp. Dent.
2015;7(1); 100-5

Mixed-dentition analysis in Libyan schoolchildren.

Bugaighis I, Karanth D, Elmouadeb H PMID: 24987652

J Orthod Sci.
2013;2: 115-119

Prevalence of malocclusion in urban Libyan schoolchildren.

Bugaighis I, Karanth D PMID: 24987636

J Orthod Sci
2013;2: 50-54

A Comparative Study of Physical and Mechanical Properties of the Different Grades of Australian Stainless-Steel Wires. S.G. Sankar, V.S. Shetty, H.S.D. Karanth	Trends Biomater. Artif. Organs 2011;25: 67-74
Force characteristics of nickel-titanium open and closed coil springs in a simulated oral environment. Jebby J, Karanth H.S.D. , Shetty K.S.	J Ind Orthod Soc. 2002;35:76-88
Canine retraction by sectional arch technique: Comparison of characteristics between T Loop retraction spring and PG retraction spring Karanth H.S.D. , Shetty V.S.	J Ind Orthod Soc. 2002;35:17-27
Orthodontic tooth movement and the bioelectricity Karanth HS , Shetty. K.S. PMID: 11987660	Indian J Dent Res. 2001;12: 212-221
Comparative study of various intrusive arches Karanth H.S.D. , Shetty V.S.	J Ind Orthod Soc. 2001;34:82-91
Interpretation of hand and wrist radiographs in estimating the skeletal maturational status Divakar HS , Jayade VP	J Ind Dent Assoc. 2000;71:122-125
An odontometric study of a Tibetan Population. Divakar HS , Jayade VP PMID: 9590924	Aust Orthod J. 1998; 15: 93-100
Genetic considerations in orthodontics Divakar HS , Shama P, Shetty VS	Indian Journal of Orofacial Genetics 1998:1:6-12
Rectangular finishing wires Divakar HS , Jayade VP	J Ind Orthod Soc. 1997; 28: 3-10
A comparison of mandibular condylar locations between the unstrained rest position and maximum intercuspal position in temporomandibular dysfunction cases and in asymptomatic subjects, using a Mandibular Position Indicator Divakar HS , Jayade VP	J Ind Orthod Soc. 1996; 27: 63- 73
Perception of profile: Use of “Jig-Saw” Divakar HS , Gopalakrishnan NS	J Ind Orthod Soc. 1995; 26: 89- 93
Comparison of uprighting springs made from lighter Australian wires – A pilot study Divakar HS , Jayade VP	J Ind Orthod Soc. 1995; 26:15-17

Contribution to Books

Primary Failure of Eruption Lorri Ann Morford, James K. Hartsfield, Jr., Divakar Karanth	Genetics in Orthodontics James K. Hartsfield, Jr., Lorri Ann Morford, ed. In Progress
Clear Aligner Treatment	Mohamed Bazina, Divakar Karanth, ed. In Progress
Preventive and Interceptive Orthodontics Divakar HS	Orthodontics, The Art and Science Bhalajhi SI, ed. New Delhi: Arya (Medi) Publishing House, 1997:223-234
Evolution of occlusion Divakar HS	Dental Anatomy, Histology and Development Bhalajhi SI, ed. New Delhi: Arya(Medi)Publishing House, 1998
Delaire’s architectural and structural craniofacial analysis Abraham MT, Gopalakrishnan NS, Divakar HS	Complete Management of Cleft lip and Palate. Gopalkrishnan NS. Ed. Dharwad: BM Group Publication 1993:150-157

Abstracts

3D printed biodegradable piezoelectric scaffold for bone regeneration.

D. Karanth, L. Sharab, D.R. Dawson, H.W. Roberts, D.A. Puleo

<https://iadr.abstractarchives.com/abstract/20iags-3321082/3d-printed-biodegradable-piezoelectric-scaffold-for-bone-regeneration>

J Dent Res
99(A) 0870, 2020.

Skeletal Anchorage in a Rat Model of Orthodontic Tooth Movement.

Y. Ibrahim, S. Gudhimella, D Karanth, S. Pandruvada, S. Huja

<https://iadr.abstractarchives.com/abstract/17iags-2640085/skeletal-anchorage-in-a-rat-model-of-orthodontic-tooth-movement>

J Dent Res
96 (A) 3188, 2017.

Rate of Orthodontic Tooth Movement (OTM) in a Rodent Model Using Light Forces.

S. Gudhimella, Y. Ibrahim, A. Kluemper, D Karanth, S. Pandruvada, P. Westgate, D. Puleo, S. Huja

<https://iadr.abstractarchives.com/abstract/17iags-2639908/rate-of-orthodontic-tooth-movement-otm-in-a-rodent-model-using-light-forces>

J Dent Res
96 (A) 3187, 2017.

Residents' Journal Review:

Hartsfield JK, Kluemper TM, Dan G, Karanth D

Am J Orthod Dentofacial Orthop
2018; 153:616-9

Interpretation of hand and wrist radiographs in estimating skeletal maturational status.

Divakar HS, Jayade VP

Indian J Dent Res.
2001;12:112

Biochemical events associated with Connective tissue remodeling

HS Divakar Karanth

J Ind Orthod Soc.
2000; 33: 48

Genetic considerations in orthodontics.

Divakar HS, Shama P, Shetty VS

Indian Journal of Orofacial Genetics
1998; 1: 33

Comparison of intrusive arches

Divakar HS, Shetty VS

J Ind Orthod Soc.
1998; 30: 99

Developing and evaluating 3D Printed Resorbable PLLA Scaffold for Bone Regeneration.

Divakar Karanth, David Puleo, Dolph Dawson, Lina Sharab

SAO Newsletter
April 2021, Page 9-10

Image from the Research work featured in the University of Kentucky website

<https://www.research.uky.edu/light-microscopy-core>

Google Scholar link

https://scholar.google.com/citations?hl=en&user=Smg-Uo8AAAAJ&view_op=list_works&sortby=pubdate

ResearchGate link

https://www.researchgate.net/profile/Divakar_Karanth

University of Florida

<https://dental.ufl.edu/profile/karanth-divakar/>

Faculty Member of Continuing Education Courses

Orthodontics for the General Dentist and Pediatric Dentist

UFCD Orthodontic department's EC course

Sept. 2022

Artificial Intelligence in Orthodontics

Faculty Research Seminar –UF College of Dentistry.

March 2022

Orthodontics for the General Dentist and Pediatric Dentist

UFCD Orthodontic department's EC course

Oct. 2021

3D Printed Resorbable Scaffold for Bone Regeneration

Faculty Research Seminar –UF College of Dentistry.

Jan. 2021

Orthodontics for the General Dentist and Pediatric Dentist

UFCD Orthodontic department's EC course

Oct. 2020

3D Printed Resorbable Scaffold for Bone Regeneration

CE course for the UFCD student research group

Oct. 2020

Basic techniques in Orthodontics

Workshop organized by "Rajasthan Orthodontic Study Group"

Dec. 2007

Hands-on orientation course on MBT Philosophy & Technique

Hyderabad Orthodontic study group

Sept. 2007

Comprehensive Hands-on course on MBT Treatment Mechanics Four days of Continuous Education Program	July 2007
Hands-on course on MBT Treatment Mechanics Four days of Continuous Education Program	March 2006
Hands-on course on MBT Treatment Mechanics Four days of Continuous Education Program	Feb. 2005
Hands-on course on Surgical Orthodontics using MBT Treatment Mechanics Four days of Continuous Education Program	Feb. 2004
Comprehensive Hands-on course on MBT Treatment Mechanics Four days of Continuous Education Program	Feb. 2003
Comprehensive Hands-on course on Pre adjusted edgewise appliance Four days of Continuous Education Program	Feb. 2002
Comprehensive Hands-on course on Pre adjusted edgewise appliance Four days of Continuous Education Program	June 2000

Research Projects

CURRENT RESEARCH ACTIVITIES

1. **3D-printed resorbable bone mimicking scaffolds using isolated collagen and nanometer-sized bone particles** 2020
D. Karanth, L Gower, D Meyer, Y Huang, C Dolce. S Holliday.

This research is aimed at developing resorbable bone-mimicking scaffolds using isolated collagen from the rat tail in which nanometer-sized bone particles are incorporated. This research is in collaboration with researchers from the College of Engineering and biomedical engineers. We will be standardizing the method of printing and testing them for various properties to build on previous studies in which we made use of 3D printing to develop resorbable bone-mimicking scaffolds. With further development, such scaffolds could be used in place of bone grafts and could be fabricated to fit ideally into the sites where they are clinically needed. The novel idea from our discussions is to create printed resorbable bone biomimetics using isolated collagen and nanometer-sized bone particles. Efforts are underway to construct and test such scaffolds in vitro and in vivo model systems

MASTER'S THESIS, UNIVERSITY OF KENTUCKY

2. **Developing and evaluating the piezoelectric scaffold for alveolar bone regeneration.** 2017-2020
D. Karanth, D.A. Puleo, D.R. Dawson, L. Sharab.

This research was funded by an NIH pilot study grant. We developed and analyzed a biodegradable scaffold using poly L-lactic acid (PLLA), a biocompatible and electroactive polymer that could be used for bone regeneration. The fiber size of 150µm and the pore size of 300µm scaffolds were 3D printed using a Prusa i3 MK3® printer. The surface morphology of the scaffold was studied using SEM. The microarchitectural analysis was done using MicroCT. Crystallographic characterization was done by X-ray diffraction. The elasticity modulus was tested using the electromechanical testing system. The piezoelectric potential generation upon mechanical distortion was characterized using a piezo film lab pre-amplifier and an oscilloscope. Hydrolytic degradation was studied at 4, 8 and 12 weeks. Cytotoxicity test was done using osteoblast cells grown on the scaffold using the CCK8 cell viability test. SEM and multiphoton microscopy were used to analyze the cell attachment to the scaffold and its proliferation. The 3D-printed PLLA scaffold showed promising properties akin to natural bone, and it is worth investigating further for bone regeneration.

CRANIOFACIAL BIOLOGY EXTERNSHIP RESEARCH, UNIVERSITY OF KENTUCKY:

3. A rodent model using skeletal anchorage and low forces for orthodontic tooth movement.

2016-2017

S. Gudhimella, D. Karanth, A. Ibrahim, A. Kluemper, P. Westgate, S.S. Huja

The purpose of this study was to determine the viability of a skeletal anchorage and the effect of low force (~3 cN) on inter radicular bone volume during OTM. Ninety Sprague-Dawley rats were divided into 5-time points. In a split-mouth design, a miniscrew and a nickel-titanium coil spring placed a load of 3 cN (experimental) or 0 cN (sham) on the maxillary first molar. Displacement of the first molar and bone volume/total volume (BV/TV) in the interradicular region were quantified. The success rate of the miniscrew was 98.9% (89 out of 90). Linear and angular tooth movement increased steadily (mean 0.1 mm/wk, 0.48 mm at 40 days). BV/TV was significantly reduced between the tooth movement and non-tooth movement sides in the 3 cN group: by 13%, 23%, 15%, 23%, and 16% at 3, 7, 14, 28, and 40 days, respectively. Our model resulted in efficient OTM without skeletal anchorage failure. BV/TV reduction was lower than in previous reports. This novel validated model is likely to be the basis for future studies.

2016-2017

4. Relationships between Moderate to Severe External Apical Root Resorption (EARR) concurrent with Orthodontic Treatment and Patient-Reported Allergy and/or Asthma

D. Karanth, L. A. Morford, J. Dempsey, M. Moremi, A. Abouelnour, G. Falcao-Alencar, G. T. Kluemper, J. V. Macri, J. K. Hartsfield, Jr.

This study was designed to test the hypothesis that patients with self-reported allergies and/or asthma would be at higher risk of developing EARR concurrent with orthodontia than allergy/asthma-free individuals. Besides, we hypothesized those patients who lack tonsils/adenoids prior to orthodontic treatment would be at lower risk of EARR. We investigated the interaction between EARR, EARR-associated genetic variations and allergy/asthma. **Method:** This case-control study included 1458 orthodontically treated patients recruited from an Indiana Private Practice, pre and post-treatment radiographs from 530 Caucasian patients were evaluated for EARR. 39 EARR cases were identified. Cases were age and sex-matched with two “unaffected”-controls. Buccal swabs were collected, genomic DNA isolated, and genetic markers tested within the IL1b and P2RX7 genes. Chi-square or logistic regression was used to test for associations/interactions between EARR and self-reported health history (SRHH) or genetic data, with significance at $p < 0.05$. **Results:** The number of “unaffected”-controls with allergies was significantly elevated compared to EARR-cases with allergies ($p = 0.01$; odds ratio (OR) = 0.27 95%CI=0.09-0.86). There were no significant associations between EARR-status and asthma ($p = 0.46$), tonsil-removal ($p = 0.38$) or adenoid-removal ($p = 0.65$). There were no interactions between EARR-status, allergy-status and the genetic markers examined. **Conclusions:** We rejected our hypothesis that allergies associated with EARR patients more frequently than “unaffected”-control patients. We lacked the power to evaluate relationships between EARR and asthma, or tonsil/adenoid-removal.

MASTER OF DENTAL SURGERY IN ORTHODONTICS THESIS: KARNATAK UNIVERSITY

5. A comparison of mandibular condylar location between unstrained retral position and maximum inter-cuspal position in TMD cases and asymptomatic subjects, using a Mandibular Position indicator.

1992-1995

Divakar HS, Jayade VP

This study was aimed at Testing the hypothesis that Condylar Position is a significant factor in Temporomandibular Joint dysfunction (TMD) causation. **Method:** We investigated mandibular condylar location between unstrained retral position and maximum inter-cuspal position in TMD cases and asymptomatic subjects, using the mandibular position indicator of the SAM articulator (SAM®; Präzisionstechnik GmbH, München, Germany). This Case control study recruited 30 TMD cases and 30 asymptomatic control subjects from SDM College of Dental Sciences and Hospital. Cases were age and sex-matched with “unaffected”- controls. **Conclusions:** There was no significant association between the condylar position and the TMD. We rejected the hypothesis that the condylar position is the significant factor in causing the TMD.

Continuing Education Courses Attended

UF/IFAS Artificial Intelligence Summit 2022 University of Florida, Gainesville, FL.	June 2022
AAOF Awards Application Workshop from The American Association of Orthodontists Foundation Webinar	June 2022
American Association of Orthodontists 2022 Annual Meeting Miami, FL. Attended Virtually	May 2022
CE Course on Role of Orthodontics in Interdisciplinary Management of Esthetic problems: Integrating Tooth Movement to Enhance Restorative and Periodontal Objectives. Dr. Premaraj Sundaralingam, NSU's College of Dental Medicine, UF Orthodontics, Gainesville, FL.	March 2022
2nd Annual Dr. Clark Hodge Memorial Lecture. Evolution of Surgery First technique- Over the last Decade Dr. Flavio Uribe, University of Connecticut, UF Orthodontics, Gainesville, FL.	April 2022
uLab Systems™ hands-on course on in-house aligners. Kelley Richardson, Joel Siegel from uLab, UF Orthodontics, Gainesville, FL.	April 2022
The Edward H. Angle Society of Orthodontists North Atlantic Component Meeting St. Pete Beach, FL.	April 2022
Florida Association of Orthodontists Annual Meeting Tampa, FL	March 2022
Florida Cleft Palate-Craniofacial Association Annual Meeting Gainesville, FL	Jan 2022
tomas® TAD Conference 2022 Las Vegas	Dec 2021
American Board of Orthodontics Educator's Meeting 2021 St. Louis, MO	Oct. 2021
LightForce Orthodontics Hands-on Course Arian Smith, LightForce Orthodontics, UF Orthodontics, Gainesville, FL.	Aug. 2021
AAOF Awards Application Workshop from The American Association of Orthodontists Foundation Webinar	July 2021
Southern Association of Orthodontists 2021 Annual Meeting Charlotte	Oct. 2021
American Association of Orthodontists 2021 Annual Meeting Virtual Meeting	June. 2021
Hipergator Symposium on Artificial intelligence by UF Informatics Institute Gainesville, FL	March 2021
American Association of Orthodontists 2022 Winter Meeting Orlando, FL	Jan 2021
AAO 2022 Leadership Development Conference Orlando, FL	Jan 2021
Florida Cleft Palate Craniofacial Association Annual Meeting Gainesville, FL	Jan 2021

Southern Association of Orthodontists 2020 Annual Meeting Virtual Meeting	Nov. 2020
American Association of Orthodontists 2020 Annual Meeting Virtual Meeting	May. 2020
Controversial Topics in Orthodontics: Can We Reach Consensus? The 47th Annual Moyers Symposium Dr. David Rice, Dr. James McNamara, Dr. Won Moon, Dr. Chin-Wei Wang, Dr. Alexandre DaSilva, Dr. Jeffrey Nickel, Dr. Bhavna Shroff, Dr. Carlos Flores Mir, Dr. Mazyar Moshiri. at Ann Arbor, Michigan	Feb 2020
American Association of Orthodontists 2019 Annual Meeting Los Angeles, CA.	May. 2019
Southern Association of Orthodontists 2019 Annual Meeting Orlando, FL	Nov. 2019
Impact of 3D Digital Technology in Orthodontics & Creating an Efficient Digital Workflow. Dr. Edwin Lin, KAO annual meeting, Frankfort, KY.	Aug. 2019
American Association of Orthodontists 2018 Annual Meeting Washington, DC.	May. 2018
Be the Digital Orthodontist: Learn to 3D surf Dr. Christian Kenworthy, KAO 2018 Annual Meeting, Louisville, KY.	Aug. 2018
Digital -CAD/CAM Orthodontics & The Evolution of Lingual Orthodontics Dr. Brandon Owen, University of Kentucky Graduation CE course, Lexington, KY	May 2018
Effective, Efficient and personalized Orthodontics: Patient-centered approaches and innovations Dr. William Giannobile, Dr. David Carlson, Dr. Laura Iwasaki, Dr. Thomas Kluemper, Dr. David Sarver at Ann Arbor, Michigan	March 2018
Efficiency in orthodontics and what's new in accelerated orthodontics Dr. Chung How Kau. Kentucky Association of Orthodontists 2017 Annual Meeting, KY.	August 2017
Clinical Trial Network and Team Science: Moving Discoveries to Interventions 12th Annual CCTS Spring Conference, Lexington, KY	March 2017
Sleep Apnea: What every clinician (and patient) should know. The 44th Moyers Symposium. Dr. Anita Shelgikar, Dr. Douglas Krisch, Dr. Vishesh Kapur, Dr. Joseph Helman, Dr. Timothy Hoban at Ann Arbor, Michigan.	March 2017
Personalized and Precision Orthodontic Therapy- 2016 Innovators' workshop Dr. David Covell, Dr. Laura Iwasaki, Dr. Frazier-Bowers, Dr. Sunil Kapila, Dr. Huja, Dr. Nickel at West Palm Beach, Florida	Sept 2016
Excellence in Orthodontics Dr. Girish Karandikar, Dr. Sridhar Premkumar, Dr. Jayesh Rahalkar at Hubli, India.	June 2011
Fundamentals of Professional Photography Mr. Prasad Pankar, CMYK Academy of Photography, Goa, India.	March 2011
Contemporary edgewise treatment with the pre-adjusted appliance: Current concepts and Technique Dr. Anup Sondhi, Indianapolis, USA.	Nov. 2006
Basic Lingual Orthodontic Course Dr. Rafi Romano, Tel Aviv, Israel.	April 2006
Meeting Today's Orthodontic Challenges with MBT System Dr. John Bennett, Dr. Fredrik Bergstrand, London, U.K.	Nov. 2005
The biological basis of Orthodontics and Optimal Orthodontics with Amalgamated Technique Dr. Ze'ev Davidovitch, Ohio, & Dubravko Pavlin, Texas, USA.	July 2005
Micro implant Anchorage (MIA) and Lingual Orthodontics	Nov. 2004

Dr. Hee Moon Kyung, Daegu, Korea.

Sheridan (Essix) Technology

Dr. John J. Sheridan from Louisiana, USA.

Nov. 2004

Common Sense Mechanics in everyday Orthodontics

Dr. Thomas F Mulligan, Arizona, USA.

Nov. 2004

First National Conference on Evidence-Based Dentistry

Dr. Derek Richards from Oxford University and Jackstud, Oslo University

March 2001

Distraction Osteogenesis Course

Prof Bhasker Rao Dr. A. Ayoub, Prof. K.F. Moos, University of Glasgow, United Kingdom.

Nov. 2001

Team Management of Cleft and Craniofacial Anomalies

Prof. H. Sailer, President, International cleft lip and palate foundation Zurich- Switzerland.

Jan. 2001

Biomechanical Basis for Excellence The advanced course

Dr. Rohit Sachdeva, Texas, USA.

Nov. 2000

BMJ-MAHE Workshop on Medical Writing

Mr. Richard Smith, Editor, British Medical Journal, United Kingdom.

Feb. 1998

Orthodontic Continuing Education Program

Prof. Jyothindra Kumar, Department of Orthodontics, Government Dental College, Trivandrum, India.

July 1997

The Refined Begg Appliance, Advanced Course

Dr. Doyle W Baldridge, Shreveport, LA, USA.

July 1997

Biostatistical Technique in Controlled Clinical Trials

The Indian Council of Medical Research (ICMR) Chennai, India. (Two weeks course)

March 1996

Biomechanics in Space Closure

Dr. Rohit C.L. Sachdeva, Baylor University, TX, USA.

Nov. 1995

Modern Begg Course

Dr. Colin Twelftree, Australia.

Nov. 1995

Workshop on Surgical Orthodontics

Prof. Malcolm Jones and Mr. Adrian Sugar, Cardiff, United Kingdom.

March 1995

Complete Management of Cleft lip and Palate

Drs. AF Markus, V. Illankovan, RB Ward-Booth, N Samman, JFW Hodgkins, United Kingdom.

Dec. 1993

An update on the refinements in Orthodontic techniques

Indian Orthodontic Society at Dharwad, India.

June 1993

Twin Block Technique

Prof. Jayade, Dharwad, India.

April 1993

Mixed Dentition Treatment

Prof. Peterson from Loma Linda University, USA.

Jan. 1993

Community Service

Give Kids A Smile

University of Kentucky College of Dentistry

Feb 2020

Professional Affiliations

Society of Educators - American Association of Orthodontists	President-Elect (2022-23)
The Edward H. Angle Society of Orthodontists, North Atlantic Component	Affiliate Member
Society of Educators - American Association of Orthodontists	Secretary and treasurer (2021-22)
College of Diplomates of the American Board of Orthodontics	Member
American Association of Orthodontics (AAO)	Member
Southern Association of Orthodontics (SAO)	Member
Kentucky Association of Orthodontics (KAO)	Member
American Dental Association (ADA) (Kentucky Dental Association, Blue Grass Dental Society)	Member
International / American Association for Dental Research (IADR/AADR)	Member
American Dental Education Association (ADEA)	Member
Consortium for Translational Orthodontic Research (CTOR) Hoboken, NJ	Member
Indian Orthodontic Society	Life member
Indian Society for Dental Research (Branch of IADR)	Life member
Indian Academy of Orofacial Genetics	Founder member

Committee memberships

"Clinical Assistant / Associate Professor of Pediatric Dentistry" Search Committee University of Florida College of Dentistry	2022
Promotion and Tenure Committee University of Florida College of Dentistry	2022
Peer Review Committee University of Florida College of Dentistry	2021-22
Advanced Education Committee (AEC) University of Florida College of Dentistry	2021- Present
"Clinical Professor of Pediatric Dentistry" Search Committee University of Florida College of Dentistry	2022
Orthodontics Committee - 2023 CODA accreditation site visit Department of Orthodontics, University of Florida College of Dentistry	2021-23
School of Advanced Dental Education (SADS) Committee University of Florida College of Dentistry	2021- Present
Information Technology Steering Committee University of Florida College of Dentistry	2021-Present
Ad hoc Committee for Standard 5 – Patient Care Services: 2023 CODA accreditation site visit University of Florida College of Dentistry	2021-23

Orthodontic Interest group Chair University of Florida College of Dentistry	2021-22
“Clinical Assistant / Associate Professor of Orthodontics” Search Committee University of Florida College of Dentistry	2021-22
“Research Assistant / Associate Professor of Orthodontics” Search Committee University of Florida College of Dentistry	2021
“Clinical Assistant / Associate Professor and Clinic Director” Search Committee UF Health Dentistry- Wildlight	2021
Graduate Orthodontics Selection Committee Department of Orthodontics, University of Florida College of Dentistry	2020-Present
Interns Search Committee (Department of Orthodontics). University of Florida College of Dentistry	2021-Present
DMD Research Mentor Program University of Florida College of Dentistry	2020-Present
Code of Professional and Academic Responsibility Committee (Honor Code Committee). University of Kentucky College of Dentistry	2017-2018

Professional Positions

Reviewer	European Journal of Orthodontics	2022 – Present
Reviewer	Medicina	2022 – Present
Reviewer	ACS Applied Bio Materials	2021 – Present
Reviewer	Acta Biomaterialia	2020 – Present
Reviewer	Biomedical Materials	2020 – Present
Reviewer	Journal of Biomedical Materials Research: Part B - Applied Biomaterials	2020 – Present
Reviewer	Biomedical Physics & Engineering Express	2020 – Present
Reviewer	Orthodontics and Craniofacial Research	2020 – Present
Reviewer	Dentistry Journal	2021 – Present
Editorial board member	Journal of Indian Orthodontic Society	1996-2009
Editor	Indian Journal of Orofacial Genetics.	1997-1998
Assistant Editor	Indian Journal of Dental Research.	1997-1998
Book & Journal Reviewer	Indian Journal of Dental Research.	1997-1998
Editorial Board	Medical Science Monitor, New York.	2002
Chairmen, Students Scientific Sessions	39 th Indian Orthodontic Conference, Davangere.	2004
Judge, Students Scientific Sessions	36 th Indian Orthodontic Conference, Cochin.	2001
Organizing Committee	39 th Indian Orthodontic Conference, Davangere.	2004
Accreditation Committee Member	Rajiv Gandhi University of Health Sciences, Karnataka.	2002-2007
Accreditation Committee Member	Dental Council of India, New Delhi.	2002-2007

Moderator for the Scientific Sessions

9th Indian Orthodontic Society's Post Graduate Students Convention	Dharwad, 2005
8th Indian Orthodontic Society's Post Graduate Students Convention	Mangalore, 2004
39th Indian Orthodontic Conference	Davangere, 2004
38th Indian Orthodontic Conference	Coimbatore, 2003
37th Indian Orthodontic Conference	Lucknow, 2002
36th Indian Orthodontic Conference	Cochin, 2001