



Dr. Mohammed H. Elnagar, DDS, MS, PhD

University of Illinois, Chicago

2023 Burstone-Indiana Biomechanics Award

Burstone Fellows in Biomechanics

Biography

Dr. Mohammed H. Elnagar is an Assistant Professor in the Department of Orthodontics at the University of Illinois Chicago. He received his DDS graduating with honors as class Valedictorian, followed by a General Practice Residency, Master of Dental Science, and Ph.D. He is also completing a Certificate of Specialty in Orthodontics from the University of Illinois Chicago (UIC). In 2022 he obtained a certificate in Artificial Intelligence applications in health care from the Massachusetts Institute of Technology (MIT).

Dr. Elnagar practices orthodontics in Chicago with a focus on Digital orthodontics, dentofacial orthopedics with skeletal anchorage, and surgical orthodontics. Furthermore, he is the Director of the digital and AI Laboratory at UIC orthodontics; his Research Interests are 3D Imaging, 3D printing TADs, Artificial intelligence applications in Health Care, and Clinical and Transitional research. Dr. Elnagar received the Robert Ricketts Award and Albert Westfall award from the American Association of Orthodontists Foundation.

The AAO also appointed him to be the recipient of the AAO Academy of Academic Leadership Sponsorship Program Award for 2019. In addition, Dr. Elnagar was elected as secretary for American Association for Dental Research Chicago section in 2020. And the Society of Educators of the American Association of Orthodontists editor in 2021. More recently in 2023 he received Burstone-Indiana Biomechanics Award Designated as a Burstone Fellow in Biomechanics.

Project Synopsis

Funding from AAOF was crucial for my research project Aims are to develop, test, and validate automated interpretable Deep Learning (DL) algorithms for the assessment of Skeletal maturity and growth prediction using CBCT. An automated high-performance system would assist the orthodontist in diagnosis, treatment planning. The funding from the AAOF is crucial for our project, to support our interdisciplinary team, and to obtain primary data for Federal grant. Furthermore, it will assist in the development of my career as an Educator, Clinician, and Scientist.