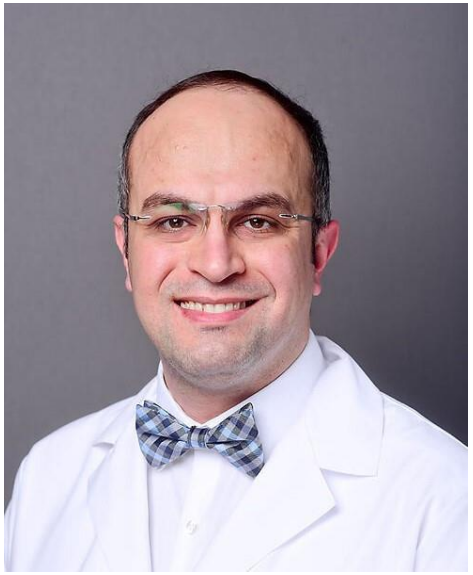
Dr. Mohammed Elnagar



Session Date: Saturday, October 19, 2024

Session Time: 9:30 AM – 10:30 AM

Presentation: *"Revolutionizing Orthodontic Care: Embracing the Future with AI Algorithm Development and Implementation"*

Synopsis: Artificial Intelligence (AI) is a dynamic technology that has significantly impacted various aspects of our daily lives, including healthcare. In dentistry, the continuous evolution of AI presents opportunities for clinicians to enhance diagnosis, predict treatment outcomes, streamline digital workflows, and monitor treatments effectively. However, developing reliable AI algorithms poses significant challenges. This lecture aims to elucidate the fundamental concepts of AI and its current applications in dentistry, focusing on the implementation of remote monitoring and AI during treatment. Additionally, we will discuss the limitations of current AI systems and explore future opportunities for innovation in this rapidly evolving field.

Objectives:

- Understand the fundamental concepts of artificial intelligence (AI) and its relevance to orthodontics.
- Explore the development and implementation process of AI algorithms specific to orthodontic applications.
- Examine the various ways AI is revolutionizing orthodontic care, including diagnostic imaging, treatment planning, and patient monitoring.

Biography:

Dr. Mohammed Elnagar is an Assistant Professor in the Department of Orthodontics at the University of Illinois Chicago (UIC). He received his DDS graduating with honors as class Valedictorian, followed by a General Practice Residency, Master of Dental Science. Dr. Elnagar completed a Certificate of Specialty in Orthodontics and a joint PhD program in oral health sciences at the University of Illinois Chicago. 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 the 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, for his work on emerging technologies, he received Burstone-Indiana Biomechanics Award Designated as a Burstone Fellow in Biomechanics.