Veerasathpurush Allareddy
2026 Center Award
University of Illinois-Chicago

Symposium and Workshop for Training Next Gen Clinician Scientists in Big Data and AI Methods

Biography: Dr. Veerasathpurush (Sath) Allareddy serves as Professor, Dr. Allan G. Brodie Endowed Chair, and Head of Department of Orthodontics at University of Illinois Chicago. His clinical expertise is in Cleft and Craniofacial Orthodontics. His research interests include practice-based research, health services research and policy, and cleft/craniofacial outcomes. Dr. Allareddy serves as the Director of the Specialty Node of National Dental Practice-Based Research Network and Vice Chair of Planning and Awards Review Committee of the American Association of Orthodontists Foundation. Dr. Allareddy is a strong advocate of Team science and has been successful in fostering research collaborations between multiple Universities and has published over 300 articles in peer reviewed journals.

Description of project: In the current healthcare landscape, there is a severe shortage of data scientists in oral health. This is particularly more pronounced in the specialty of orthodontics. The deluge of data we expect to witness in the next few years will set the context for a dynamic change in how we establish a solid empirical framework for data-driven clinical decision making. We anticipate a paradigm shift in how we will conduct research and make informed clinical decision-making. It is critical that our profession prepares to address the challenges stemming from the shortage of clinician data scientists. In this project, we will conduct a big data analytics workshop to train 10 full-time orthodontic faculty members across the country in big data and artificial intelligence based analytical approaches. Subsequently, a symposium will be conducted where the trainees present their work.

Statement of how orthodontic education will benefit from your award: While there has been a burgeoning interest in implementing big data and artificial intelligence methods into clinical orthodontics practice and research, there is a mismatch between expertise available and what is essential to keep up with the interest. This asymmetry has to be addressed in the near future if our profession needs to keep pace with rapid advancements and infusion of big data and artificial intelligence methods and related technologies. Through our project, we will train the next generation of clinician data scientists.

Why the Foundation is important to your project: Currently, there is a paucity of clinician data scientists and limited funding avenues to support the next generation of orthodontics educators to be trained in data sciences. Through support from the Foundation, we will train a critical mass of orthodontic educators in data sciences. We are thankful to the Foundation for supporting this endeavor to train the next generation of clinician data scientists.

How the Foundation funding is expected to or has benefitted your career?

The Foundation has been one my biggest supporters during the early phase of my academic career. I have been the recipient of two Biomedical Research Awards and the present Center Award. These awards were instrumental in kick-starting my research endeavors in practice-based research and big data analytics. The Biomedical Research Awards paved the way for me to become the Director of Specialty

Node of the National Dental Practice-Based Research Network, which is funded by NIH/NIDCR. With the Foundation's help, I have been successful in obtaining tenure and a professorship. I currently serve as the Head of Department of Orthodontics and Dr. Allan G. Brodie Endowed Chair at University of Illinois Chicago College of Dentistry. I strongly encourage my faculty colleagues and residents to support the Foundation's activities.