KIYOSHI TAI, D.D.S., Ph. D.

The Japanese Specialist of Orthodontics (Japan Association of Adult Orthodontics), 2015
Ph.D., Okayama University, Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, 2012
The Japanese Qualified (recognized) Orthodontist, The Japanese Orthodontic Society, 2012
Orthodontic Department, Okayama University Dental School, 1997
Prosthetic Department, Okayama University Dental School, 1992
Doctor of Dental Medicine, Tokushima University, 1992
Visiting Clinical Professor, Post graduate Orthodontic Program, Arizona School of Dentistry and Oral Health, Mesa Arizona, USA, 2015
Adjunct Assent Professor, Graduate School of Dentistry, Kyung Hee University, South Korea, 2010-2015
Visiting Clinical Assistant Professor, Post graduate Orthodontic Program, Arizona School of Dentistry and Oral Health, Mesa Arizona, USA, 2009 - 2015
Instructor, Orthodontic Specialty Program, Japan Association of Adult Orthodontics, 2013

Presentation Date:	**Monday 7 May 2018 9:00 AM - 10:00 AM & 2:00 PM - 3:00 PM**
Venue	**SMX CONVENTION CENTER MANILA Function Room 5**
Presentation Title:	**THE DAWN OF DIGITAL ORTHODONTICS**

Digital imaging is now an important tool for orthodontists, and the greatest advancement in the past decade has come with the development CBCT - Cone Beam Computed Tomography. It is possible to reconstruct a 3D image of a patient's skull and dental anatomy. An alternative to CBCT is the safer MRI - Magnetic Resonance Imaging. With software we can extract hard tissue data from soft tissue images, making it practical in orthodontics. MR images offer several advantages over conventional imaging modalities, without the risk of radiation. We demonstrated that MRI could be added to CBCT as a useful orthodontic diagnostic procedure. We have rendered 2D cephs from MRI data. This means MRI can be used to evaluate facial growth and treatment outcomes. Technological advances, representing the 3D intraoral scanner have already reached practical level. By superimposing the scanned data on the CBCT or MRI data, we can create a virtual patient. This is also advantageous for the finite element simulation analysis. Mechanical evaluation of dental orthodontic movement can be analyzed by this technique.For individual orthodontic patients, we can simulate the movement of teeth and their roots.Treatment can be better optimized and customized using these data. Combining these new techniques with MRI or CBCT, more efficient and effective treatment can be proposed to the patient. The presentation will introduce the current state of our digital orthodontics and the vision for the near future.