



# How may a theoretical understanding of voice production guide clinical voice therapy practice

**Dr Roger W. Chan**  
University of Texas Southwestern Medical Center

**24 May 2016 (Tuesday)**  
**Room 750, Meng Wah Complex, HKU**  
**5:30 – 7:00 pm**  
*Chair: Dr Lawrence Ng*

**Abstract:**

Some key concepts of human voice production will be presented. In particular, important acoustical and biomechanical aspects of phonation and speech production will be addressed, in order to demonstrate how a better understanding of such principles could provide the theoretical basis for certain speech and voice therapy approaches. Examples of concepts and principles that may be covered include: (1) models of the physics of vocal fold oscillation; (2) vocal fundamental frequency regulation; (3) phonation threshold pressure; and (4) inertive acoustic impedance of the vocal tract. The therapeutic approaches of vocal function exercises and phonation with a semi-occluded vocal tract will be discussed as illustrative examples of the impact of theoretical principles on clinical practice.

**About the speaker:**

Dr Roger Chan is Associate Professor of Otolaryngology - Head and Neck Surgery, and Biomedical Engineering at the University of Texas Southwestern Medical Center in Dallas, Texas. He completed his B.Sc. in Speech and Hearing Sciences at the University of Hong Kong, and his Ph.D. in Communication Sciences and Disorders at the University of Iowa. Dr. Chan's research interests include the acoustics and biomechanics of voice production, the development of biological implants for laryngeal surgery, and bioengineering of the larynx. His work has been supported by the U.S. National Institutes of Health. His publications have appeared in peer-reviewed journals of multiple disciplines, with a rather significant impact (an H-index of 23 according to the Web of Science). Dr. Chan has also served on multiple panels reviewing grant proposal applications for national funding agencies around the world.

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