

This talk will focus on how science has positively influenced vocal pedagogy. Areas covered will include: *Knowing the Breath Cycle* – re-conceptualizing the concept of “support”; and *Knowing about Resonance* – identifying key resonance strategies employed in the upper passaggio of the male and female voice. *Knowing the Breath Cycle* will discuss the four stages of breathing mapped out by Dr. Ingo Titze, highlighting the three dimensions of thoracic expansion and how proper thoracic pressure can be maintained throughout the cycle while singing or speaking. *Knowing about Resonance* will include a discussion of formant tuning/resonance strategies for the vowel [a]. With regard to the upper passaggio of the female voice, the discussion will focus on two resonance strategies: 1) Classical Mode - in the pre-passaggio region, while singing the vowel [a], F2 tends to track H2, then, moving into and above the passaggio, F1 begins to track the fundamental; and 2) Non-classical Mode – the pre-passaggio tuning of F2/H2 is maintained in and above the passaggio. The same two strategies will be defined with regard to the male singing voice as well: 1) Classical Mode – pre-passaggio, F1 tracks H2, then, in and above the passaggio, F2 tracks H3; and 2) Non-classical Mode – the pre-passaggio tuning of F1/H2 is maintained in and above the passaggio. The scope of this discussion will include how to employ this knowledge in the voice studio, i.e., how to adjust the vocal tract in order to ensure the tuning strategy is employed. The use of real-time spectrographic feedback will also be covered.