

Nov 9th, 12 noon

Toronto Rehab – University Centre, 12-177

Respiratory Mechanics by Oscillometry and using Imaging & Modelling for Small Airways Dysfunction in Asthma and Obesity

Abstract: Respiratory mechanics are the determination of how hard it is to move air into and out of the lungs, but we measure lung function clinically instead by how much air we can expire maximally using a technique known as spirometry. These are very different things, and tell us very different details about respiratory health. Here I will compare measurements of spirometry and oscillometry in asthma and in obesity, and using modelling, and magnetic resonance imaging with hyperpolarized He, I hope to demonstrate how we can use oscillometry to more sensitively differentiate central and small airway dysfunction using examples from measurements in children and adults with asthma and in health and in severely obese patients with surgically induced weight-loss.



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Geoff obtained his PhD in Biomedical Engineering at McGill University where he studied lung mechanics at the Meakins-Christie Laboratories, and did post-doctoral training at the Harvard School of Public Health. He leads the respiratory cell and lung mechanics laboratory at Dalhousie University focused on measurement, modelling and developing of novel technologies for understanding lung function from airway cell to human in health and asthma and COPD.

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