**DAVID NGUYEN**, Queen's University
*Shifted convolutions and applications*

Many problems in analytic number theory can be reduced to studying a suitable average of the shifted convolution $a(n)a(n+h)$, where $a(n)$ is the coefficients of interest. Determining which average is sufficient is part of the challenge. In this talk, I will survey my works on the shifted convolution problem when the coefficients $a(n)$ is the 3-fold divisor function and discuss an application.