



PIMS / AMI / Colloquium Seminar



Thursday, October 6, 2011
3:30 p.m.
CAB 657

“Orthogonal Polynomials, Riemann-Hilbert Problems and Painlevé Transcendents”

R. Wong
City University of Hong Kong

Abstract

The three subjects mentioned in the title may appear to be totally unrelated. But they are now beautifully connected in some recent investigations on the asymptotic behavior or orthogonal polynomials. In this lecture, I will illustrate this connection with the orthogonal polynomials associated with the exponential weight $w(x) = e^{-nV(x)}$, where n is an integer and $V(x)$ is the double-well potential

$$V(x) = \frac{x^4}{4} + \frac{t}{2}x^2$$

with t being an arbitrary real number.

Reception will be in CAB 649 at 4:30 p.m.