

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research*

*Department of Mathematics*

## COLLOQUIUM

# Partial Frobenius integrability and its applications

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### **Abstract**

Will start with the work of Frobenius in 1877 on integrability of distribution of tangent subspaces and trace the development of partial Frobenius integrability through the work of Carathéodory on the second law of thermodynamics in 1909, Chow Wei-liang's generalization in 1939, and Hörmander's work on sums of squares of vector fields in 1967. Then will discuss recent applications to Kohn's conjecture on subellipticity for finite-type domains and to the abundance conjecture in algebraic geometry.

**Date:** December 15, 2011 (Thursday)

**Time:** 4:00 – 5:00pm

**Place:** Room 210, Run Run Shaw Bldg., HKU

*All are welcome*