

**INSTITUT SAINS MATEMATIK  
UNIVERSITI MALAYA  
SIRI KOLOKIUUM**

- Tajuk:** Operator Inequalities: Analogies between Complex Numbers and Hilbert Space Operators
- Penceramah :** Prof. Mohammad Sal Moslehian  
Ferdowsi University of Mashhad, Iran
- Tarikh :** 14 Mac 2008 (Jumaat)
- Masa :** 10.00 am – 11.00 am
- Tempat :** MM3, INSTITUT SAINS MATEMATIK

**Abstract**

Whenever we see a result concerning real or complex numbers (commutative case), a nice question is to ask ourselves whether it is true for bounded linear operators on a Hilbert space or their norms (noncommutative case). In this lecture, we investigate some analogies and differences between numbers and operators, for instance, we discuss Hermitian decomposition, polar decomposition and inequalities related to the positivity. We focus on equalities and describe some methods by which we may extend a number inequalities to new operator inequalities, for example we examine Bohr's inequality, Arithmetic-geometric inequality and other mean inequalities. A discussion of norm inequalities such as reverse Cauchy-Schwarz inequality is given as well.

**SEMUA DIJEMPUT HADIR**