



Department of Mathematics  
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# Seminar

## *Cohomologies on almost complex manifolds and the $\partial\bar{\partial}$ -lemma*

*Mr. Chi Cheuk TSANG*  
*The Chinese University of Hong Kong*

### Abstract

We will start by introducing the Nijenhuis-Lie derivatives. Then we specialize to almost complex manifolds and use these to define new cohomological invariants called the J-cohomology and N-cohomology in a recent joint work with Ki-Fung Chan and Spiro Karigiannis. We will prove the main theorem in the paper which relates the J-cohomology with the  $\partial\bar{\partial}$ -lemma. If time permits, we will prove finite dimensionality in certain cases, or work out a few examples.

**Date :** November 15, 2017 (Wednesday)

**Time :** 3:00p.m. – 4:00p.m.

**Venue :** Room 222, Lady Shaw Building  
The Chinese University of Hong Kong

*All are Welcome*