

# 2023 泛函分析及空间理论 天元暑期研讨班

Representations of Commutators on Schatten  
 $p$ -classes ( $1 < p < \infty$ )

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## Abstract

Let  $\mathcal{C}_p$  be the Schatten  $p$ -classes for  $1 < p < \infty$  and  $\mathcal{T}_p$  be the closed subspace of  $\mathcal{C}_p$  consisting of all lower triangular matrices. In this talk, we focus on the representation for commutators on  $\mathcal{C}_p$ . Specifically, we will show that a linear bounded operator  $T$  is a commutator on  $\mathcal{C}_p$  if and only if  $T$  is not of the form  $\lambda I + K$  for some nonzero complex number  $\lambda$  and  $K$  is a  $\mathcal{C}_p$ -strictly singular operator. The main ingredient in our proof is the characterization of commutators on  $\mathcal{T}_p$ .

**Time:** Wednesday, August 9, 2023, 15:00-16:00

**Venue:** Zheng Xin Building, Room 21

More information:

<http://im.hit.edu.cn/2023/0710/c15123a320434/page.htm>

