

THE REAL CYCLE CLASS MAP AND ITS APPLICATIONS**Fudan Topology Seminar****Speaker: Heng Xie****Sun-Yat sen University****Time: Thur, Sep. 29, 2022 13:30 - 15:30****Meeting Zoom ID: 853 0188 1524 Password: Fudan2022**

Abstract: What is the singular cohomology in algebraic geometry? Classically, for smooth varieties X over complex numbers, there are cycle class maps from Chow groups to singular cohomology. For smooth varieties X over real numbers, I will construct a real cycle class map from I-cohomology to singular cohomology and show that the real cycle class is compatible with pullbacks, pushforwards, and intersection products. These results are proved in a joint work with J. Hornbostel, M. Wendt, and M. Zibrowius. Together with F. Jin, we generalize the real cycle class map construction from smooth varieties to singular varieties. I will discuss some applications of the real cycle class map.