Speaker: **Li, Tian-Jun**
Title: *Space of symplectic forms*
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Abstract: Let M be a closed oriented smooth $4-$manifold admitting symplectic structures. We study the number of of equivalence classes of symplectic canonical classes on M. If M has $b^+ = 1$, we prove there is a unique equivalence class. This result, together with results of Taubes and Witten, implies that the this number is finite for any M. We also study which second cohomology class on M is represented by symplectic forms. In particular, if M is minimal and has $b^+ = 1$, we show that every class of positive square has symplectic representatives.