

# Kähler manifolds

## 1 Hermitian metric on complex manifolds

**Definition 1.** Let  $X$  be a complex manifold and  $E \rightarrow X$  a holomorphic vector bundle. A *Hermitian metric* on  $E$  is a smoothly varying family of Hermitian inner products  $\langle \cdot, \cdot \rangle_x$  on the fibers  $E_x$  for each  $x \in X$ , i.e., **Yang: To be continued.**

## Appendix

DRAFT