

1072-17-13

**Liang Kong\*** ([kong.fan.liang@gmail.com](mailto:kong.fan.liang@gmail.com)), Institute for Advanced Study (Science Hall), Tsinghua University, Beijing, 100084, Peoples Rep of China. *Conformal field theory and a new geometry*. Preliminary report.

I will start with a discussion on the impact of string theory on our understanding of geometry from a single angle, and then argue that conformal field theories (CFT) provide an entirely new algebraic geometry. Then I will review the vertex-operator-algebra approach towards open-closed CFT. In the rational cases, I will show that open-closed CFTs satisfying a strong boundary condition can be classified. Using this classification, I will discuss some basic properties of the new geometry such as Holographic Principle and a precise relation between dualities and invertible defects. (Received May 10, 2011)