

## **INVARIANT GLOBAL SECTIONS OF CHIRAL DE RHAM COMPLEX**

**Speaker: Xuanzhong Dai**  
**Shanghai Center for Mathematical Sciences**

**Time: Mon, May 23rd, 10:30-11:00**

**Tencent Meeting ID: 603-290-724**

**Password: 101101**

### **Abstract:**

Chiral de Rham complex introduced by Malikov et al. in 1998, is a sheaf of topological vertex algebras on any complex analytic manifold or non-singular algebraic variety. Starting from the vertex algebra of global sections of chiral de Rham complex on the upper half plane, we consider the subspace of  $\Gamma$ -invariant sections that are meromorphic at the cusps. The space is again a vertex operator algebra, with a linear basis consisting of lifting formulas of meromorphic modular forms. We will describe two types of lifting formulas, and generalize the Rankin-Cohen bracket to the meromorphic modular forms.