Speaker: Eckhard Meinrenken, University of Toronto

Title: Moduli spaces of hyperbolic 0-metrics

Abstract: A hyperbolic 0-metrics on a compact surfaces Σ with boundary $\partial \Sigma$ is a hyperbolic metric on the interior, with a boundary behaviour similar to that of the Poincaré metric on the upper half plane. We define the Teichmüller or Riemann moduli spaces of such metrics as quotients

$$\operatorname{Teich}(\Sigma) = \operatorname{Hyp}(\Sigma) / \operatorname{Diff}_0(\Sigma, \partial \Sigma), \quad \mathcal{M}(\Sigma) = \operatorname{Hyp}(\Sigma) / \operatorname{Diff}^+(\Sigma, \partial \Sigma)$$

where $\text{Diff}^+(\Sigma, \partial \Sigma)$ are orientation preserving diffeomorphisms fixing the boundary, and $\text{Diff}_0(\Sigma)$ is the identity component. We show that these spaces have natural symplectic structures, and are examples of Hamiltonian Virasoro spaces. Bases on joint wok with Anton Alekseev.