1116-51-859 **Dylan G.L. Allegretti***, Department of Mathematics, Yale University, 10 Hillhouse Ave., New Haven, CT 06511. *New results on the structure of quantum Teichmüller space.*

In 1999, Chekhov and Fock showed that the Teichmüller space of a punctured surface admits a canonical quantization. It is generally believed that quantum Teichmüller theory should play an important role in the formulation of pure (2+1)-dimensional quantum gravity with negative cosmological constant and its holographic dual theory. In this talk, I will report on my recent work with Hyun Kyu Kim on the structure of quantum Teichmüller space. Our results describe a canonical set of elements of the deformed algebra of functions on the Teichmüller space with many remarkable properties conjectured by Fock and Goncharov. (Received September 14, 2015)