

**Title:** Quantum vertex  $C((t))$ -algebras and their modules

**Abstract:** In this talk, I will present a theory of what we called (weak) quantum vertex  $C((t))$ -algebras. First, I will give the basic definitions and a general construction of weak quantum vertex  $C((t))$ -algebras and their modules. Then I will present an example of quantum vertex  $C((t))$ -algebras associated to certain quantum  $\beta\gamma$ -system. At the end, I will show how one can associate weak quantum vertex  $C((t))$ -algebras to quantum affine algebras.