

## **On the deformation theory of chiral quantizations**

Dylan Butson

I will explain an operadic approach to deformation quantization of vertex Poisson algebras, a chiral analogue of the classical problem of deformation quantization of Poisson algebras. Our main result is an order-by-order deformation-obstruction theory for such quantizations, controlled by the chiral analogue of Poisson cohomology. Applications include a parameterization of chiral quantizations of affine symplectic varieties in terms of their de Rham cohomology, rigidity of boundary Virasoro minimal models, and inverse Hamiltonian reduction for affine W-algebras in type A.