

---

**NIKLAS GARNER**, University of Washington, Seattle

*Raviolo vertex algebras*

I will describe work with B. Williams developing an algebraic structure modeling local observables in mixed holomorphic-topological quantum field theories in three dimensions. The resulting algebraic structure is directly analogous to a vertex algebra, but where holomorphic functions on a punctured complex curve are replaced by (derived) functions on a punctured 3-manifold that are constant along the leaves of chosen transverse holomorphic foliation. Time permitting, I will describe a construction appearing in work with S. Raghavendran and B. Williams on how Higgs and Coulomb branches of 3d  $\mathcal{N} = 4$  theories are encoded in this structure.