BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

# BULK-BOUNDARY CORRESPONDENCES WITH FACTORIZATION ALGEBRAS

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MCS B31, Oct 5, 2022, 4-5pm

Tea: 3:45pm in Room B24

**Abstract:** We will describe how factorization algebras on manifolds with boundary arise from quantum field theory; this is joint work with Eugene Rabinovich and Brian Williams. This framework offers a useful perspective on Kontsevich's deformation quantization of Poisson manifolds as well as the relationship of loop groups to quantum groups via perturbative Chern-Simons theory. Given time, I'll sketch a systematic higher dimensional version for higher abelian CS theory on an oriented smooth manifold of dimension 4n+3 with boundary a complex manifold of complex dimension 2n+1; it has an interesting relationship with the intermediate Jacobian.

See `http://math.bu.edu/research/geom/seminar.html` or contact Yu-Shen Lin (*yslin@bu.edu*) or Siu-Cheong Lau (*lau@math.bu.edu*) for more information.