BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

EQUIVARIANT LOCALIZATION IN FACTORIZATION HOMOLOGY AND OMEGA BACKGROUNDS

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Perimeter

April 3, 2019, 4:00 – 5:00pm
Math/Computer Science, Room 148
111 Cummington Street, Boston

Tea: 3:45pm in Room 144

Abstract: I will introduce factorization algebras and their factorization homology as a framework for mathematically encoding quantum field theories and certain invariants they give rise to, generalizing the notions of vertex algebras and their conformal blocks.

Then, I will give the definition of an equivariant factorization algebra on a variety with group action, and explain an analogue of the equivariant localization theorem for factorization homology.

Time permitting, I will explain some applications of the theorem, which include a mathematical account of a new construction of the vertex algebras associated to 4d N=2 gauge theories introduced by Beem et al., and a family of results relating representation theory with equivariant enumerative geometry, generalizing the identification of the equivariant J function of the flag variety with the norm of a Whittaker vector for the Langlands dual group.

See `http://math.bu.edu/research/geom/seminar.html` or contact Yoosik Kim (*yoosik@bu.edu*) or Siu-Cheong Lau (*lau@math.bu.edu*) for more information.